

GenCore version 4.5
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OM protein - protein search, using sw model

Run on: July 10, 2002, 08:25:43 ; Search time 10:36 Seconds
(without alignments)
59.799 Million cell updates/sec

Title: US-09-508-054-19
Perfect score: 87

Sequence: 1 YLRIVQCRSVEGSCGF 16

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 105224 seqs, 38719550 residues

Post-processing: Minimum Match 0%
Maximum Match 100%

Listing first 150 summaries
105224
Minimum DB seq length: 0
Maximum DB seq length: 2000000000
Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 150 summaries

Database : SwissProt_40::*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

| Result No. | Score | Query Match | Length | DB ID | Description |
|------------|-------|-------------|--------|---------------|----------------------------|
| 1 | 83 | 95.4 | 217 | 1 SOMA_CALJA | Q9gmb3 callithrix |
| 2 | 83 | 95.4 | 217 | 1 SOMA_HUMAN | P01241 homo sapien |
| 3 | 83 | 95.4 | 217 | 1 SOMA_MACMU | P33093 macaca mulu |
| 4 | 83 | 95.4 | 217 | 1 SOMA_SATEB | P88343 saimiri bol |
| 5 | 83 | 95.4 | 217 | 1 SOMV_HUMAN | P01242 homo sapien |
| 6 | 80 | 92.0 | 217 | 1 PLL_HUMAN | P01243 homo sapien |
| 7 | 71 | 81.6 | 217 | 1 SOMV_MACMU | Q07370 macaca mulu |
| 8 | 52.5 | 60.3 | 215 | 1 SOMA_MONDO | Q9g160 monodelphis |
| 9 | 51 | 59.2 | 190 | 1 SOMA_BALDO | P33092 balanopter |
| 10 | 51 | 59.2 | 190 | 1 SOMA_LAMPA | P37885 lama quanic |
| 11 | 51 | 59.2 | 190 | 1 SOMA_LOKAF | P20392 loxodontida |
| 12 | 51 | 59.2 | 190 | 1 SOMA_VULVO | P10766 vulpes vulp |
| 13 | 51 | 59.2 | 215 | 1 SOMA_TRIVU | Q67754 trichosurus |
| 14 | 51 | 59.2 | 216 | 1 SOMA_CANFA | P33711 canis familiaris |
| 15 | 51 | 59.2 | 216 | 1 SOMA_FELICA | P16404 felis silve |
| 16 | 51 | 59.2 | 216 | 1 SOMA_HORSE | P01245 equus cabal |
| 17 | 51 | 59.2 | 216 | 1 SOMA_MESAU | P37886 mesocricetus |
| 18 | 51 | 59.2 | 216 | 1 SOMA_MOUSE | P06880 mus musculus |
| 19 | 51 | 59.2 | 216 | 1 SOMA_BOVIN | P19795 mustela vison |
| 20 | 51 | 59.2 | 216 | 1 SOMA_PIG | P01248 sus scrofa |
| 21 | 51 | 59.2 | 217 | 1 SOMA_GALOE | Q9gka1 galago senegalensis |
| 22 | 51 | 59.2 | 217 | 1 SOMA_NYCPY | Q9gmb2 nycticebus |
| 23 | 48 | 55.7 | 216 | 1 SOMA_RABBIT | P6407 oryctolagus |
| 24 | 47.5 | 54.6 | 216 | 1 SOMA_RAT | P01244 rattus norvegicus |
| 25 | 46.5 | 53.4 | 217 | 1 SOMA_BOVIN | P01246 bos taurus |
| 26 | 46.5 | 53.4 | 217 | 1 SOMA_BUBBU | Q88938 bubalus bubalis |
| 27 | 46.5 | 53.4 | 217 | 1 SOMA_CEREP | P56437 cervus elaphus |
| 28 | 46.5 | 53.4 | 217 | 1 SOMA_SHEEP | P01247 ovis aries |
| 29 | 43.5 | 50.0 | 215 | 1 SOMA_RANCA | P0813 rana catesbeiana |
| 30 | 42 | 48.3 | 216 | 1 CADH_MOUSE | Q9r100 mus musculus |
| 31 | 41 | 47.1 | 227 | 1 PRRA RAT | P09320 rattus norvegicus |
| 32 | 41 | 47.1 | 569 | 1 PYRD_PLAFA | Q88210 plasmoidium |
| 33 | 41 | 47.1 | 1964 | 1 NTCA_MOUSE | P31695 mus musculus |

| | | | | |
|-----|------|------|------------------|---|
| 34 | 40 | 46.0 | 1 LPXD_CHLTR | Q84245 chlamydia trachomatis |
| 35 | 40 | 46.0 | 1 ATSL_MOUSE | P928n6 chlamydia pneumoniae |
| 36 | 40 | 46.0 | 1 DPO1_ADE02 | P97857 mus musculus |
| 37 | 40 | 46.0 | 1 DPO1_ADE02 | P03261 human adenovirus |
| 38 | 40 | 46.0 | 1 DPO1_ADE05 | P04495 human adenovirus |
| 39 | 40 | 46.0 | 1 Y192_HUMAN | P93074 homo sapiens |
| 40 | 39.5 | 45.4 | 1 PRL_BUEJA | P43001 bufo japonicus |
| 41 | 39.5 | 45.4 | 1 SOM1_ACIGU | P26773 acipenseridae |
| 42 | 39.5 | 45.4 | 1 SOM2_ACIGU | P26774 acipenseridae |
| 43 | 39.5 | 45.4 | 1 SOMA_LABRO | P09w617 labeo rohita |
| 44 | 39.5 | 45.4 | 1 SOM1_CARAU | P09w617 labeo rohita |
| 45 | 39.5 | 45.4 | 1 SOM2_CARAU | P09w617 labeo rohita |
| 46 | 39.5 | 45.4 | 1 SOMA_CTEID | P20390 ctenopharyngodon idahoensis |
| 47 | 39.5 | 45.4 | 1 SOMA_CYPRA | P10298 cyprinus carpio |
| 48 | 39.5 | 45.4 | 1 SOMA_MISM1 | P0w6j5 misgurnus misgurnus |
| 49 | 39.5 | 45.4 | 1 SOMA_LEPOS | P79885 lepisosteus osseus |
| 50 | 39.5 | 45.4 | 1 SOMA_BUENAU | P09335 carassius carassius |
| 51 | 39.5 | 45.4 | 1 SOMA_XENIA | P09336 carassius carassius |
| 52 | 39.5 | 45.4 | 1 PLL1_RAT | P21702 rattus norvegicus |
| 53 | 39.5 | 45.4 | 1 TH11_TRYBB | P06221 trypanosoma brucei |
| 54 | 39.5 | 45.4 | 1 TH12_TRYBB | P09037 trypanosoma brucei |
| 55 | 39.5 | 45.4 | 1 SUS1_HUMAN | P09g21 homo sapiens |
| 56 | 39 | 44.8 | 1 RECP_ACICA | P42438 acinetobacter calcoaceticus |
| 57 | 39 | 44.8 | 1 LPXD_CHLNU | P09p1f1 chlamydia pneumoniae |
| 58 | 39 | 44.8 | 1 YAGB_SCHPO | P09874 schizosaccharomyces pombe |
| 59 | 39 | 44.8 | 1 YNO7_ARCPO | P027977 archaeoglobus fulgidus |
| 60 | 39 | 44.8 | 1 GGT1_HUMAN | P36269 homo sapiens |
| 61 | 39 | 44.8 | 1 VPP2_MOUSE | P15920 mus musculus |
| 62 | 39 | 44.8 | 1 LDLR_RAT | P35952 rattus norvegicus |
| 63 | 38.5 | 44.3 | 1 SOMA_LANGJA | P08899 anguilla japonica |
| 64 | 38.5 | 44.3 | 1 CADG_HUMAN | P075309 homo sapiens |
| 65 | 38 | 43.7 | 1 IEL11_MONCH | P10296 momordica charantia |
| 66 | 38 | 43.7 | 1 VA0D_MANSE | P05531 manduca sexta |
| 67 | 38 | 43.7 | 1 VA0D_DRONE | P12953 homonotus |
| 68 | 38 | 43.7 | 1 VA0D_HUMAN | P094p5 drosophila melanogaster |
| 69 | 38 | 43.7 | 1 VA0D_MOUSE | P51863 mus musculus |
| 70 | 37.5 | 43.1 | 1 PRL1_PROTTERUS | P73091 protopterus australis |
| 71 | 37.5 | 43.1 | 1 SOMA_ESOLU | P373484 prototterus australis |
| 72 | 37.5 | 43.1 | 1 SOMA_ONCMY | P34744 esox lucius |
| 73 | 37.5 | 43.1 | 1 SOM1_ONCMY | P09538 oncomyces corynebacterium |
| 74 | 37.5 | 43.1 | 1 SOM2_ONCMY | P09538 oncomyces corynebacterium |
| 75 | 37.5 | 43.1 | 1 SOMA_CORAVU | P91221 oncorhynchus tshawytscha |
| 76 | 37.5 | 43.1 | 1 SOMA_CORONUS | P45655 coregonus artedii |
| 77 | 37.5 | 43.1 | 1 SOMA_CORYON | P013188 coregonus lavaretus |
| 78 | 37.5 | 43.1 | 1 SOMA_ONCKE | P01064 oncorhynchus keta |
| 79 | 37.5 | 43.1 | 1 SOMA_ONCKI | P10607 oncorhynchus keta |
| 80 | 37.5 | 43.1 | 1 SOMA_ONCNA | P09g955 oncorhynchus keta |
| 81 | 37.5 | 43.1 | 1 SOMA_ONCNS | P07221 oncorhynchus keta |
| 82 | 37.5 | 43.1 | 1 SOMA_SALMSA | P10814 salmo salar |
| 83 | 37 | 42.5 | 1 ITR2_MONCH | P10295 momordica charantia |
| 84 | 37 | 42.5 | 1 DEF1_MYTGA | P80571 mytilus galloprovincialis |
| 85 | 37 | 42.5 | 1 Y17_HAEIN | P43960 haemophilus suis |
| 86 | 37 | 42.5 | 1 PLL2_MOUSE | P09586 mus musculus |
| 87 | 37 | 42.5 | 1 VOD2_DRONE | P09rcq3 drosophila melanogaster |
| 88 | 37 | 42.5 | 1 WNT1_CHICK | P09337 galulus gallus |
| 89 | 37 | 42.5 | 1 PGK_OPISI | P50111 opisthotrichus galligaster |
| 90 | 37 | 42.5 | 1 CADH_RAT | P046372 comamonas tenebrionis |
| 91 | 37 | 42.5 | 1 BPA1_PSEPS1 | P052438 pseudomonas aeruginosa |
| 92 | 37 | 42.5 | 1 BPAH_BURCE | P37333 burkholderia cepacia |
| 93 | 37 | 42.5 | 1 BPAH_PSEPS | P052028 pseudomonas aeruginosa |
| 94 | 37 | 42.5 | 1 YHWA_YEAST | P38860 saccharomyces cerevisiae |
| 95 | 37 | 42.5 | 1 CHSD_ASPPU | P78746 aspergillus fumigatus |
| 96 | 37 | 42.5 | 1 CADH_RAT | P55281 rattus norvegicus |
| 97 | 37 | 42.5 | 1 CADH_HUMAN | P046372 comamonas tenebrionis |
| 98 | 37 | 42.5 | 1 ATSL_RAT | P09wq1 rattus norvegicus |
| 99 | 37 | 42.5 | 1 SOG_DRONE | P24025 drosophila melanogaster |
| 100 | 37 | 42.5 | 1 CO4_MOUSE | P010299 mus musculus |
| 101 | 37 | 42.5 | 1 THYG_HUMAN | P01266 homo sapiens |
| 102 | 36.5 | 42.0 | 1 SOMA_CARD8 | P24363 caranx deli |
| 103 | 36.5 | 42.0 | 1 VNS1_EHDV2 | P27585 epizootic haemorrhagic disease virus |
| 104 | 36 | 41.4 | 1 PA26_BUNFA | P00627 bungaruss fasciatus |
| 105 | 36 | 41.4 | 1 PA2A_BUNFA | P00628 bungaruss fasciatus |
| 106 | 36 | 41.4 | 1 PA2B_BUNFA | P00629 bungaruss fasciatus |

107 36 41.4 212 1 AGI1_WHEAT
108 36 41.4 220 1 UPAS_RAT
109 36 41.4 221 1 PLL2_MESAU
110 36 41.4 222 1 UPAS_MOUSE
111 36 41.4 227 1 AGI1_ORYZA
112 36 41.4 229 1 PRL_CHICK
113 36 41.4 236 1 PLL_SHEEP
114 36 41.4 260 1 VD10_SFVKA
115 36 41.4 274 1 RECA_NEIPIH
116 36 41.4 286 1 VNS1_INCAA
117 36 41.4 286 1 VNS1_INCCA
118 36 41.4 286 1 VNST_INGGL
119 36 41.4 286 1 VNST_INCJH
120 36 41.4 286 1 VNST_INCM1
121 36 41.4 286 1 VNST_INCYA
122 36 41.4 327 1 UPAR_MOUSE
123 36 41.4 328 1 UPAR_RAT
124 36 41.4 339 1 E2BL_ARCFU
125 36 41.4 350 1 WNBB_MOUSE
126 36 41.4 351 1 WNBB_HUMAN
127 36 41.4 357 1 WNBB_CHICK
128 36 41.4 358 1 WNBB_BRARE
129 36 41.4 428 1 WNBB_XENLA
130 36 41.4 430 1 VGF9_BPFF1
131 36 41.4 442 1 TBL2_MOUSE
132 36 41.4 453 1 5HT1_ALPCA
133 36 41.4 513 1 POLG_HCVJ2
134 36 41.4 558 1 TF65_CHICK
135 36 41.4 579 1 UVRC_METTH
136 36 41.4 653 1 EGLN_MOUSE
137 36 41.4 854 1 LDLR_CTRGR
138 36 41.4 918 1 YK62_CAEEL
139 36 41.4 967 1 AT51_HUMAN
140 36 41.4 1174 1 PTNL_HUMAN
141 36 41.4 1175 1 PTNL_RAT
142 36 41.4 1176 1 PTNL_MOUSE
143 36 41.4 1680 1 FUR2_DROME
144 36 41.4 1744 1 CO4_HUMAN
145 36 41.4 2769 1 THYG_BOVIN
146 35.5 40.8 829 1 CADG_RABIT
147 35 40.8 830 1 CADG_MOUSE
148 35 40.2 162 1 CRF_CARAU
149 35 40.2 171 1 RPB7_YEAST
150 35 40.2 198 1 FAS6_RHOFA

ALIGNMENTS

RESULT 1
SOMA_CALJA STANDARD; PRTR; 217 AA.

ID SOMA_CALJA STANDARD; PRTR; 217 AA.
AC Q9GNB3; PRTR; 217 AA.
DT 01-MAR-2002 (Rel. 41, Created)
DT 01-MAR-2002 (Rel. 41, Last sequence update)
DT 01-MAR-2002 (Rel. 41, Last annotation update)
DE Somatotropin precursor (Growth hormone).
GN Callithrix jacchus (Common marmoset).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Platyrrhini; Callitrichidae; Callithrix.
NCBI_TaxID=9483;
OX [1].

RN SEQUENCE FROM N.A.
RP Wallis O.C., Wallis M.;
RT "Cloning and characterisation of a putative growth hormone encoding
gene from the marmoset (Callithrix jacchus).";
RL Submitted (AUG-2000) to the EMBL/Genbank/DBJ databases
CC -!- FUNCTION: GROWTH HORMONE PLAYS AN IMPORTANT ROLE IN GROWTH
CC -!- CONTROL.
CC -!- SUBCELLULAR LOCATION: Secreted.
CC -!- SIMILARITY: BELONGS TO THE SOMATOTROPIN/PROLACTIN FAMILY.

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CC
CC EMBL: AJ297563; CAC03481; 1; -
DR InterPro; IPR01400; SOMATOTROPIN.
DR PR00103; hormone; 1.
DR PRINTS; PR08036; SOMATOTROPIN.
DR PROSITE; PS00266; SOMATOTROPIN_1; 1.
DR PROSITE; PS00338; SOMATOTROPIN_2; 1.
DR Hormone; Pituitary; Signal.
KW Hormone; Pituitary; Signal.
FT SIGNAL; 1 26 BY SIMILARITY.
FT CHAIN; 27 217 BY SIMILARITY.
FT DISULFID; 79 191 BY SIMILARITY.
FT DISULFID; 208 215 BY SIMILARITY.
SQ SEQUENCE 217 AA; 24959 MW; E102151A12E6192 CRC64;

Query Match 95.4%; Score 83; DB 1; Length 217;
Best Local Similarity 93.8%; Pred. No. 3.9e-06;
Matches 15; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Y 1 YLRIVQCRSVEGSGCF 16
Db 202 FLRIVQCRSVEGSGCF 217

RESULT 2
SOMA_HUMAN STANDARD; PRTR; 217 AA.
ID SOMA_HUMAN STANDARD; PRTR; 217 AA.
AC P01241;
DT 21-JUL-1986 (Rel. 01, Created)
DT 01-MAR-1992 (Rel. 21, Last sequence update)
DT 01-OCT-2001 (Rel. 40, Last annotation update)
DE Somatotropin precursor (Growth hormone).
DE GHI.
GN Homo sapiens (Human).
OS Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX NCBI_TaxID=9606;
RN [1].

RP SEQUENCE FROM N.A.
RX MEDLINE=8204939; PubMed=6269091;
RA Denoto F.M., Moore D.B., Goodman H.M.;
RT "Human growth hormone: DNA sequence and mRNA structure: possible
alternative splicing.";
RT Nucleic Acids Res. 9:3719-3730(1981).
RN [2].

RP SEQUENCE FROM N.A.
RX MEDLINE=8004477; PubMed=3626281;
RA Roskam W., Rougeon F.;
RT "Molecular cloning and nucleotide sequence of the human growth
hormone structural gene.";
RT Nucleic Acids Res. 7:305-320(1979).
RN [3].

RP SEQUENCE FROM N.A.
RX MEDLINE=79203293; PubMed=377496;
RA Martial J.A., Hallewell R.A., Baxter J.D., Goodman H.M.;
RT "Human growth hormone: complementary DNA cloning and expression in
bacteria.";
RT Science 205:602-607(1979).
RN [4].

RP SEQUENCE FROM N.A.
RX MEDLINE=89307277; PubMed=2744760;
RA Chen E.Y., Liao Y.C., Smith D.H., Barrera-Saldana H.A.,
RT "Human growth hormone: complementarity DNA cloning and expression in
bacteria.";
RT Science 205:602-607(1979).
RN [5].

RP SEQUENCE FROM N.A.
RX MEDLINE=79203293; PubMed=377496;
RA Martial J.A., Hallewell R.A., Baxter J.D., Goodman H.M.;
RT "Human growth hormone: complementarity DNA cloning and expression in
bacteria.";
RT Science 205:602-607(1979).
RN [6].

RP SEQUENCE FROM N.A.
RX MEDLINE=89307277; PubMed=2744760;
RA Chen E.Y., Liao Y.C., Smith D.H., Barrera-Saldana H.A.,
RT "Human growth hormone: complementarity DNA cloning and expression in
bacteria.";
RT Science 205:602-607(1979).
RN [7].

RP SEQUENCE FROM N.A.
RX MEDLINE=89307277; PubMed=2744760;
RA Gelinas R.E., Seeburg P.H.;
RT "The human growth hormone locus: nucleotide sequence, biology, and
evolution.";
RT Genomics 4:479-497(1998).

| | | | | |
|----|--|--|---|---|
| RN | [5] | SEQUENCE OF 27-217. | RX | MEDLINE=95075462; PubMed=7984244; |
| RP | | MEDLINE=69-89202; PubMed=5810834; | RA | Somers W., Ullsch M., de Vos A.M., Kossiakoff A.A.; |
| RX | | "Human pituitary growth hormone. XIX. The primary structure of the | RA | "The X-ray structure of a growth hormone-prolactin receptor complex."; |
| RA | Li C.H., Dixon J.S., Liu W.-K.; | hormone."; | RT | Nature 372:478-481(1994). |
| RT | "Human pituitary growth hormone. XIX. The primary structure of the | RT | [16] | |
| RT | hormone."; | RL | X-RAY CRYSTALLOGRAPHY (2.5 ANGSTROMS). | |
| RL | Arch. Biochem. Biophys. 133:70-91(1969). | RN | Chantalt L., Chirgadze N.Y., Jones N., Korber F., Navaza J., | |
| RN | [6] | Arch. Biochem. Biophys. 133:70-91(1969). | RA | Pavlovsk A.G., Wlodawer A.; |
| RP | SEQUENCE OF 27-217, AND REVISIONS. | RT | "The crystal-structure of wild-type growth-hormone at 2.5-A | |
| RX | MEDLINE=72143935; PubMed=5144027; | RT | resolution."; | |
| RA | Li C.H., Dixon J.S.; | RL | Protein Pept. Lett. 2:333-340(1995). | |
| RT | "Human pituitary growth hormone. 32. The primary structure of the | RN | [17] | |
| RT | hormone: revision."; | RP | X-RAY CRYSTALLOGRAPHY (2.5 ANGSTROMS). | |
| RT | Arch. Biochem. Biophys. 146:233-236(1971). | RX | MEDLINE=97113023; PubMed=6943276; | |
| RN | [7] | Arch. Biochem. Biophys. 146:233-236(1971). | RA | Sundstrom M., Lundqvist T., Roedin J., Giebel L.B., Milligan D., |
| RN | SEQUENCE OF 27-51 AND 104-120. | RA | Norstedt G.; | |
| RX | MEDLINE=71139765; PubMed=3279046; | RT | "Crystal structure of an antagonist mutant of human growth hormone G120R, in complex with its receptor at 2.9-A resolution."; | |
| RA | Niall H.D.; | RT | J. Biol. Chem. 271:32197-32203(1996). | |
| RT | "Revised primary structure for human growth hormone."; | RL | -1. FUNCTION: GROWTH HORMONE PLAYS AN IMPORTANT ROLE IN GROWTH | |
| RN | [8] | hormone."; | CC | CONTROL. |
| RX | MEDLINE=73092028; PubMed=4675454; | CC | -1. SUBCELLULAR LOCATION: Secreted. | |
| RA | Bewley T.A., Dixon J.S., Li C.H.; | CC | -1. ALTERNATIVE PRODUCTS: A 20 kDa SHORT VARIANT WHICH LACKS 58-72 IS | |
| RT | "Sequence comparison of human pituitary growth hormone, human | CC | PRODUCED AS THE RESULT OF SPLICING AT THE ALTERNATE JUNCTION | |
| RT | chorionic somatomammotropin, and ovine pituitary growth and | CC | OF THE SECOND INTRON. | |
| RT | lactogenic hormones."; | CC | -1. DISEASE: DEFECTS IN GH1 ARE A CAUSE OF PITUITARY DWARFISM I AND | |
| RN | [9] | Int. J. Pept. Protein Res. 4:281-287(1972). | IV. | Turner's syndrome. |
| RX | MEDLINE=73092028; PubMed=4675454; | CC | -1. SIMILARITY: BELONGS TO THE SOMATOTROPIN/PROLACTIN FAMILY. | |
| RA | Bewley T.A., Dixon J.S., Li C.H.; | CC | This SWISS-PROT entry is copyright. It is produced through a collaboration | |
| RT | "Sequence comparison of human pituitary growth hormone, human | CC | between the Swiss Institute of Bioinformatics and the EMBL outstation - | |
| RT | chorionic somatomammotropin, and ovine pituitary growth and | CC | the European Bioinformatics Institute. There are no restrictions on its | |
| RT | lactogenic hormones."; | CC | use by non-profit institutions as long as its content is in no way | |
| RN | [10] | Int. J. Pept. Protein Res. 4:281-287(1972). | CC | modified and this statement is not removed. Usage by and for commercial |
| RX | MEDLINE=73092028; PubMed=4675454; | CC | entities requires a license agreement (See http://www.isb-sib.ch/announce/ or send an email to license@isb-sib.ch). | |
| RA | Griffiths K. (eds.); | CC | | |
| RP | REVISION. | CC | | |
| RA | Niall H.D.; | CC | | |
| RT | "The chemistry of the human lactogenic hormones."; | CC | | |
| RL | (In) Griffiths K. (eds.); | CC | | |
| RL | prolactin and carcinogenesis, Proc. fourth tenovus workshop prolactin, | CC | | |
| RL | PP 13-20, Alpha Omega Alpha Press, Cardiff (1972). | CC | | |
| RN | [10] | REVISONS TO 119-120 AND 157-159. | CC | |
| RX | MEDLINE=71153968; PubMed=3279528; | CC | | |
| RA | Niall H.D., Hogan M.L., Sauer R., Rosenblum I.Y., Greenwood F.C.; | CC | | |
| RT | "Sequences of pituitary and placental lactogen and growth hormones: evolution from a primordial peptide by gene reduplication."; | CC | | |
| RN | [11] | Proc. Natl. Acad. Sci. U.S.A. 68:866-869(1971). | CC | |
| RX | SEQUENCE OF 27-57 AND 73-79. | CC | | |
| RP | MEDLINE=81117361; PubMed=7462247; | CC | | |
| RA | Chapman G.E., Rogers K.M., Brittain T., Bradshaw R.A., Bates O.J., | CC | | |
| RA | Turner C., Cary P.D., Crane-Robinson C.; | CC | | |
| RT | "The 20,000 molecular weight variant of human growth hormone. | CC | | |
| RT | amino acid deletions."; | CC | | |
| RL | J. Biol. Chem. 256:2395-2401(1981). | CC | | |
| RN | [12] | J. Biol. Chem. 256:2395-2401(1981). | CC | |
| RX | SEQUENCE OF 46-57 AND 73-80. | CC | | |
| RP | MEDLINE=80130196; PubMed=73564749; | CC | | |
| RA | Lewis U.J., Bonewald L.F., Lewis L.J.; | CC | | |
| RT | "The 20,000 dalton variant of human growth hormone: location of the | CC | | |
| RT | amino acid deletions."; | CC | | |
| RL | Biochem. Biophys. Res. Commun. 92:511-516(1980). | CC | | |
| RN | [13] | Biochem. Biophys. Res. Commun. 92:511-516(1980). | CC | |
| RP | 3D-STRUCTURE MODELING. | CC | | |
| RX | MEDLINE=88190073; PubMed=3447173; | CC | | |
| RA | X-RAY CRYSTALLOGRAPHY (2.8 ANGSTROMS). | CC | | |
| RA | MEDLINE=9219657; PubMed=1549776; | CC | | |
| RA | Cohen F.E., Kuntz I.D.; | CC | | |
| RT | "Prediction of the three-dimensional structure of human growth | CC | | |
| RT | hormone."; | CC | | |
| RT | Proteins 2:162-166(1987). | CC | | |
| RN | [14] | Proteins 2:162-166(1987). | CC | |
| RP | X-RAY CRYSTALLOGRAPHY (2.8 ANGSTROMS). | CC | | |
| RA | MEDLINE=9219657; PubMed=1549776; | CC | | |
| RA | "Human growth hormone and extracellular domain of its receptor: | CC | | |
| RT | crystal structure of the complex."; | CC | | |
| RT | Science 255:306-312(1992). | CC | | |
| RN | [15] | X-RAY CRYSTALLOGRAPHY (2.9 ANGSTROMS). | CC | |
| RP | | CC | MISSING (IN 20 KDA ISOFORM). | |
| RA | | CC | T -> A (IN DBSNP:2001345). | |

FT VARIANT 105 105 /FTID=VAR_011917
S -> C (IN DBSNP:6174).
FT VARIANT 136 136 /FTID=VAR_011918;
V -> I (IN DBSNP:5388).
FT VARIANT 32 61 /FTID=VAR_011919.

FT HELIX 64 72
FT HELIX 76 77
FT TURN 80 83
FT HELIX 90 94
FT TURN 95 95
FT HELIX 98 110
FT TURN 111 114
FT HELIX 115 125

Query Match 95.4%; Score 83; DB 1; Length 217;
Best Local Similarity 93.8%; Pred. No. 3.9e-06;
Matches 15; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

FT TURN 80 83
FT HELIX 90 94
FT TURN 95 95
FT HELIX 98 110
FT TURN 111 114
FT HELIX 115 125

Query Match 95.4%; Score 83; DB 1; Length 217;
Best Local Similarity 93.8%; Pred. No. 3.9e-06;
Matches 15; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1 YLRIVQCRSVEGSCGF 16
FT TURN 80 83
FT HELIX 90 94
FT TURN 95 95
FT HELIX 98 110
FT TURN 111 114
FT HELIX 115 125

Query Match 95.4%; Score 83; DB 1; Length 217;
Best Local Similarity 93.8%; Pred. No. 3.9e-06;
Matches 15; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1 YLRIVQCRSVEGSCGF 16
FT TURN 80 83
FT HELIX 90 94
FT TURN 95 95
FT HELIX 98 110
FT TURN 111 114
FT HELIX 115 125

RESULT 4
ID SOMA_SALBB STANDARD; PRT; 217 AA.
ID SOMA_SALBB STANDARD; PRT; 217 AA.
ID SOMA_MACMU STANDARD; PRT; 217 AA.
ID SOMA_MACMU STANDARD; PRT; 217 AA.
ID P33053; AC P33053;
DT 01-OCT-1993 (Rel. 27, Created)
DT 01-OCT-1994 (Rel. 30, Last sequence update)
DT 01-FEB-1996 (Rel. 33, Last annotation update)
DE Somatotropin precursor (Growth hormone).
GN GH1.
OS Saimiri boliviensis boliviensis (Bolivian squirrel monkey).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Platyrrhini; Cebidae; Cebinae; Saimiri.
NCBI_TaxID=39432;
RN 111
RP SEQUENCE FROM N.A.
MEDLINE-2165430; PubMed-11371582;
RA Liu J.-C.; Makova K.D.; Atkins R.M.; Gibson S.; Li W.H.;
RT "Episodic evolution of growth hormone in primates and emergence of the
species specificity of human growth hormone receptor.";
RL Mol. Biol. Evol. 18:945-953(2001).
CC -1- FUNCTION: GROWTH HORMONE PLAYS AN IMPORTANT ROLE IN GROWTH
CC -1- CONTROL.
CC -1- SUBCELLULAR LOCATION: Secreted.
CC -1- SIMILARITY: BELONGS TO THE SOMATOTROPIN/PROLACTIN FAMILY.
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or send an email to license@isb-sib.ch).
CC EMBL; AF339060; AAK6287.1;
CC PROSITE; PS00266; SOMATOTROPIN_1;
CC PROSITE; PS00338; SOMATOTROPIN_2;
CC KW Hormone; Pituitary; Signal.
CC FT SIGNAL 1 26 BY SIMILARITY.
CC FT CHAIN 27 217 SOMATOTROPIN
CC FT DISULFID 79 191 BY SIMILARITY.
CC FT DISULFID 208 215 BY SIMILARITY.
CC SQ SEQUENCE 217 AA; 24864 MW; 9515289992c529F7 CRC64;
Query Match 95.4%; Score 83; DB 1; Length 217;
Best Local Similarity 93.8%; Pred. No. 3.9e-06;
Matches 15; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1 YLRIVQCRSVEGSCGF 16
FT TURN 80 83
FT HELIX 90 94
FT TURN 95 95
FT HELIX 98 110
FT TURN 111 114
FT HELIX 115 125

RESULT 5

RT somatomammotropin";
 RL Nature 270:494-499(1977).
 RN [7] RP SEQUENCE OF 27-217.
 MEDLINE=73201971; PubMed=4712450;
 RA Li C.H., Dixon J.S., Chung D.;
 RT "Amino acid sequence of human chorionic somatomammotropin.";
 RL Arch. Biochem. Biophys. 155:95-110(1973).
 RN [8] RP SEQUENCE OF 27-117.
 MEDLINE=72016313; PubMed=5286363;
 RA Sherwood L.M., Handwerger S., McLaurin W.D., Lanner M.;
 RT "Amino-acid sequence of human placental lactogen.";
 RL Nature New Biol. 233:59-61(1971).
 RN [9] RP ERATUM.
 RA Sherwood L.M., Handwerger S., McLaurin W.D., Lanner M.;
 RT Nature New Biol. 235:64-64(1972).
 RN [10] RP INTERCHAIN DISULFIDE BONDS.
 RX MEDLINE=79173081; PubMed=438159;
 RA Schneider A.B., Kowalski K., Russell J., Sherwood L.M.;
 RT "Identification of the interchain disulfide bonds of dimeric human
 placental lactogen.;"
 RL J. Biol. Chem. 254:3782-3787(1979).
 CC -1- FUNCTION: SIMILAR TO THAT OF SOMATOTROPIN.
 CC -1- SUBCELLULAR LOCATION: Secreted.
 CC -1- MISCELLANEOUS: THE SEQUENCE OF CSH-1 IS SHOWN.
 CC -1- SIMILARITY: BELONGS TO THE SOMATOTROPIN/PROLACTIN FAMILY.
 CC -1-
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 CC -1-
 EMBL; V00573; CAA23836.1; -.
 DR EMBL; J00289; AAA98747.1; -.
 DR EMBL; K02401; AA52115.1; -.
 DR EMBL; M15894; AA52116.1; -.
 DR EMBL; J03071; AA52255.1; -.
 DR PIR; A01118; AA98621.1; -.
 DR PIR; A01512; LCHUC.
 DR PIR; A26449; A26449.
 DR PIR; C32435; C32435.
 DR PIR; E32435; E32435.
 DR HSSP; P01241; 1HWH.
 DR MM; 150200; -.
 DR InterPro; IPR001400; SOMATOTROPIN.
 DR InterPro; IPR001400; SOMATOTROPIN.
 DR PRINTS; PR00836; SOMATOTROPIN.
 DR PROSITE; PS00266; SOMATOTROPIN_1; 1.
 DR PROSITE; PS00338; SOMATOTROPIN_2; 1.
 KW Hormone; Placenta; Multigene family; Signal.
 FT SIGNAL 1 26 LACTOGEN.
 FT CHAIN 27 217 LACTOGEN.
 FT DISULFID 79 191
 FT DISULFID 208 215
 FT DISULFID 208 208 INTERCHAIN (WITH C-215 IN A DIMER).
 FT DISULFID 215 215 INTERCHAIN (WITH C-208 IN A DIMER).
 FT VARIANT 3 3 P -> A (IN CSH-3).
 FT VARIANT 104 105 IS -> L (IN CSH-1).
 FT FTID=VAR_007166.
 FT FTID=VAR_007167.
 FT CONFLICT 84 84
 FT CONFLICT 95 95 MISSING (IN REF. 8).
 FT CONFLICT 116 116 MISSING (IN REF. 8).
 FT CONFLICT 134 136 SDD -> BBS (IN REF. 8).
 SQ SEQUENCE 217 AA; 25020 MW; 23580DC7A13F431 CRC64;

Query Match 92.0%; Score 80; DB 1; Length 217;
 Best Local Similarity 87.5%; Pred. No. 1.2e-05;
 Matches 14; Conservative 2; Mismatches 0; Indels 0; Gaps 0;

Qy 1 YLRIVQCRSVEGSCGF 16
 Db 202 FLRMVQCRSVEGSCGF 217

RESULT 7
 SONY_MACMU STANDARD; PRT; 217 AA.
 ID SONY_MACMU STANDARD;
 AC Q028494;
 DT 01-NOV-1997 (Rel. 35, Created)
 DT 01-NOV-1997 (Rel. 35, Last sequence update)
 DT 01-NOV-1997 (Rel. 35, Last annotation update)
 DE Growth hormone variant 1 precursor (GH-V) (Placenta-specific growth
 hormone).
 GN GH2.
 OS Macaca mulatta (Rhesus macaque).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Nematoda; Eutheria; Primates; Catarrhini; Cercopithecoidea;
 OC Cercopithecoidea; Macaca.
 NCBI_TAXID=9544;
 RN [1] RP SEQUENCE FROM N.A.
 RA Golos T.G.;
 RL Submitted (JAN-1994) to the EMBL/GenBank/DBJ/GenBank/DBJ/GenBank/DBJ databases.
 RN [2] RP SEQUENCE FROM N.A.
 RC TISSUE=Placenta;
 RX MEDLINE=9008724; PubMed=8404617;
 RA Golos T.G.; Durnig M.; Fisher J.M.; Fowler P.D.;
 RT "Cloning of four growth hormone/chorionic somatomammotropin-related
 complementary deoxyribonucleic acids differentially expressed during
 pregnancy in the rhesus monkey placenta.;"
 RL Endocrinology 113:1744-1752(1991).
 CC -1- SUBCELLULAR LOCATION: Secreted (By similarity).
 CC -1- SIMILARITY: TO THE SOMATOTROPIN/PROLACTIN FAMILY.
 CC -1-
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 CC -1-
 DR EMBL; L16555; AAA03391.1; -.
 DR HSSP; P01241; 1HGU.
 DR InterPro; IPR001400; SOMATOTROPIN.
 DR Pfam; PF00103; hormone; 1.
 DR PRINTS; PR00836; SOMATOTROPIN.
 DR PROSITE; PS00266; SOMATOTROPIN_1; 1.
 DR PROSITE; PS00338; SOMATOTROPIN_2; 1.
 KW Hormone; Placenta; Signal; Glycoprotein.
 FT SIGNAL 1 26 BY SIMILARITY.
 FT CHAIN 27 217 GROWTH HORMONE VARIANT 1.
 FT DISULFID 79 191 BY SIMILARITY.
 FT DISULFID 208 215 BY SIMILARITY.
 FT CONFLICT 208 57 L -> F (IN REF. 2).
 FT CONFLICT 57 152 E -> G (IN REF. 2).
 SQ SEQUENCE 217 AA; 25221 MW; 8DB116BC24EA090 CRC64;

Query Match 81.1-6%; Score 71; DB 1; Length 217;
 Best Local Similarity 75.0%; Pred. No. 0.00029;
 Matches 12; Conservative 3; Mismatches 1; Indels 0; Gaps 0;

Qy 1 YLRIVQCRSVEGSCGF 16
 Db 202 FLRTVRRAVEGSCGF 217

RESULT 8

SOMA_MONDO STANDARD; PRT; 215 AA.

ID Q9GL60; PRT; 215 AA.

AC Yudaev N.A., Pankov Y.A., Bulatov A.A., Osipova T.A.; "Amino acid sequence of seiwhale somatotropin." ; Biokhimia 47:1059-1069 (1982).

RT PRELIMINARY PARTIAL SEQUENCE.

RL RN [2].

RP RA

RT RA

RT Osipova T.A., Bulatov A.A., Pankov Y.A.; "Structural studies of trypic peptides from large cyanogen bromide fragments of sei whale (Balanoptera borealis) somatotropin." ; Biolog. Khim. 4:1589-1599 (1978).

RT CC -!- FUNCTION: GROWTH HORMONE PLAYS AN IMPORTANT ROLE IN GROWTH

RL CC -!- CONTROL.

DE CC -!- SUBCELLULAR LOCATION: Secreted.

GN CC -!- SIMILARITY: BELONGS TO THE SOMATOTROPIN/PROLACTIN FAMILY.

OS DR PIR; PN0140; PN0140.

CH1 DR PIR; JN0387; JN0387.

OC DR HSSP; P01246; 1B5T.

NCBII_TAXID=13616; DR InterPro; IPR00140; SOMATOTROPIN.

OX DR PFam; PF00103; hormone; 1.

RN DR PRINTS; PRO0836; SOMATOTROPIN.

RC DR PROSITE; PS00266; SOMATOTROPIN_1; 1.

RA DR PROSITE; PS00338; SOMATOTROPIN_2; 1.

Kacsoh B.; RT CDDNA from the marsupial, Monodelphis domestica." ;

RT Submitted (OCT-2000) to the EMBL/GenBank/DBJ databases

RT -!- FUNCTION: GROWTH HORMONE PLAYS AN IMPORTANT ROLE IN GROWTH

RT CC -!- CONTROL.

CC CC -!- SUBCELLULAR LOCATION: Secreted.

CC CC -!- SIMILARITY: BELONGS TO THE SOMATOTROPIN/PROLACTIN FAMILY.

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CC

EMBL; AF312023; AAG27732.1; -

DR InterPro; IPR001400; SOMATOTROPIN.

DR Pfam; PF00103; hormone; 1.

DR PRINTS; PRO0836; SOMATOTROPIN.

DR PROSITE; PS00266; SOMATOTROPIN_1; 1.

DR PROSITE; PS00338; SOMATOTROPIN_2; 1.

KW Hormone; Pituitary; Signal.

FT SIGNAL 1 25 POTENTIAL.

FT CHAIN 26 215 SOMATOTROPIN.

SQ SEQUENCE 215 AA; 24384 MW; B70462144329010 CRC64;

Query Match 59.28; Score 51.5; DB 1; Length 190; Best Local Similarity 58.8%; Pred. No. 0.29; 3; Mismatches 3; Indels 1; Gaps 1;

CC RESULT 10

SOMA_LAMPA STANDARD; PRT; 190 AA.

ID SOMA_LAMPA

AC P37885; DT 01-OCT-1994 (Rel. 30, Created)

DR DT 01-OCT-1994 (Rel. 30, Last sequence update)

RT DT 15-DEC-1998 (Rel. 37, Last annotation update)

CC DR DISULFID 52 163 BY SIMILARITY.

CC DR DISULFID 180 188 BY SIMILARITY.

CC SQ SEQUENCE 190 AA; 21835 MW; C9FBFF6DB14A75D6 CRC64;

Query Match 59.28; Score 51.5; DB 1; Length 190; Best Local Similarity 58.8%; Pred. No. 0.29; 3; Mismatches 3; Indels 1; Gaps 1;

CC Qy 1 YLRVQCRS-VBGSCGF 16

DB 174 YLRVMECRFFVESSCAF 190

CC

OS Lama guanicoe pacos (Alpaca); Capdeville J., Cascone O.; Capdeville J., Cascone O.;

OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Cetartiodactyla; Tylopoda; Camelidae; Lama.

OC OX NCBII_TAXID=10538;

RN RN [1]

RP Sequence.

CC RX MEDLINE=92104767; PubMed=1761365;

CC RA Dr Jimenez Bonino M.B., de Nue I.A., Ore R., Sanchez D., Ferrara P., Capdeville J., Cascone O.;

CC RA RA

CC RA Capdeville J., Cascone O.;

CC DR DR

CC RT RT "Primary structure of alpaca growth hormone." ;

CC RL Int. J. Pept. Protein Res. 38:193-197 (1991).

CC CC -!- FUNCTION: GROWTH HORMONE PLAYS AN IMPORTANT ROLE IN GROWTH

CC CC -!- CONTROL.

CC CC -!- SUBCELLULAR LOCATION: Secreted.

CC CC -!- SIMILARITY: BELONGS TO THE SOMATOTROPIN/PROLACTIN FAMILY.

AC DR P00103; hormone; 1.

AC DR PRINTS; PRO0836; SOMATOTROPIN.

AC DR PROSITE; PS00266; SOMATOTROPIN_1; 1.

AC DR PROSITE; PS00338; SOMATOTROPIN_2; 1.

GN DR Hormone; Pituitary.

OS FT DISULFID 52 163 BY SIMILARITY.

OS DR DISULFID 180 188 BY SIMILARITY.

OS SQ SEQUENCE 190 AA; 21789 MW; A7C67266A8B96A10 CRC64;

OS NCBII_TAXID=9768;

OS RN [1]

RP Sequence.

RP RX MEDLINE=83000569; PubMed=7115813;

Query Match 59.2%; Score 51.5%; DB 1; Length 190;
 Best Local Similarity 58.8%; Pred. No. 0.29;
 Matches 10; Conservative 3; Mismatches 3; Indels 1; Gaps 1;

Qy 1 YLRIYQCRS-VEGSCGF 16
 Db 174 YLRVMKCRREVSSCAF 190

RESULT 11
 SOMA_LOXAF
 ID SOMA_LOXAF STANDARD; PRT; 190 AA.
 AC P20392;
 RT "Primary structure of elephant growth hormone.";
 DT 01-FEB-1991 (Rel. 17, Created)
 DR 01-FEB-1991 (Rel. 17, Last sequence update)
 DT 15-DEC-1998 (Rel. 37, Last annotation update)
 DE Somatotropin (Growth hormone).
 GN GH1.
 OS Loxodonta africana (African elephant).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Proboscidea; Elephantidae; Loxodontidae.
 OC NCBI_TaxID=9785;
 RN [1]
 SEQUENCE RP
 RA Hulmes J.D., Miedel M.C., Li C.H., Pan Y.C.E.;
 RT "Primary structure of elephant growth hormone.";
 RL Int. J. Pept. Protein Res. 33:368-372 (1989).
 CC -1- FUNCTION: GROWTH HORMONE PLAYS AN IMPORTANT ROLE IN GROWTH
 CONTROL.
 CC -1- SUBCELLULAR LOCATION: Secreted.
 DR PIR: JK0219; J00219.
 DR HSSP: P01246; B1ST.
 DR InterPro: IPR01400; SOMATOTROPIN.
 DR Pfam: PF00103; hormone; 1.
 DR PRINTS: PS00266; SOMATOTROPIN_1;
 DR PROSITE: PS00338; SOMATOTROPIN_2;
 DR PROSITE: PS00338; SOMATOTROPIN.
 DR InterPro: IPR01400; SOMATOTROPIN.
 DR Pfam: PF00103; hormone; 1.
 DR PRINTS: PRO0836; SOMATOTROPIN.
 DR PROSITE: PS00266; SOMATOTROPIN_1;
 DR PROSITE: PS00338; SOMATOTROPIN_2;
 DR Hormone; Pituitary.
 KW Pituitary.
 FT DISULFID 52 163 BY SIMILARITY.
 SEQUENCE 190 AA; 21761 MW; 058860813DB/41F2 CRC64;

Query Match 59.2%; Score 51.5%; DB 1; Length 190;
 Best Local Similarity 58.8%; Pred. No. 0.29;
 Matches 10; Conservative 3; Mismatches 3; Indels 1; Gaps 1;

Qy 1 YLRIYQCRS-VEGSCGF 16
 Db 174 YLRVMKCRREVSSCAF 190

RESULT 12
 SOMA_VULV
 ID SOMA_VULV STANDARD; PRT; 190 AA.
 AC P10766;
 RT 01-JUL-1989 (Rel. 11, Created)
 DR 01-JUL-1989 (Rel. 11, Last sequence update)
 DT 01-NOV-1997 (Rel. 35, Last annotation update)
 DE Somatotropin (Growth hormone).
 GN GH1.
 OS Vulpes vulpes (Red fox).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Carnivora; Fissipedia; Canidae; Vulpes.
 OC NCBI_TaxID=9622;
 RN [1]
 SEQUENCE RP
 RT TISSUE=Pituitary;
 RX MEDLINE=8325475; PubMed=2722401;
 LI C.H., Izdebski J., Chung D.;
 RA "Primary structure of fox pituitary growth hormone.";
 RL Int. J. Pept. Protein Res. 33:70-72 (1989).

| | | | | | | | | | | |
|-----------------------|---|-----------------|------------|-------------|-----------|---------|----------|--------------|-----------------|-------------------------|
| Query Match | 59.28; | Score 51.5; | DB 1; | Length 215; | | FT | CONFLICT | 4 | 4 | S -> G (IN REF. 1). |
| Best Local Similarity | 58.89; | Pred. No. 0.32; | | | | FT | CONFLICT | 7 | 7 | N -> T (IN REF. 1). |
| Matches 10; | Conservative | 3; | Mismatches | 3; | Indels 1; | FT | SEQUENCE | 216 AA; | 24468 MW; | A8AD1DD59F1DAAED CRC64; |
| Qy | 1 YLRLYQCRS-VEGSCGF 16 | | | | | | | | | |
| Db | 199 YLRVMKCRFVESSCAF 215 | | | | | | | | | |
| RESULT | 14 | | | | | Query | Match | 59.28; | Score 51.5; | DB 1; |
| SOMA_CANFA | | STANDARD; | PRT; | 216 AA. | | Best | Local | Similarity | Pred. No. 0.32; | |
| ID | SOMA_CANFA | | | | | Matches | 10; | Conservative | Mismatches | 3; |
| AC | P3711; Q9TQ6; | | | | | Indels | 1; | | Indels | 1; |
| DT | 01-FEB-1994 (Rel. 28, Created) | | | | | Gaps | | | | |
| DT | 16-OCT-2001 (Rel. 40, Last sequence update) | | | | | | | | | |
| DT | 16-OCT-2001 (Rel. 40, Last annotation update) | | | | | | | | | |
| DE | Somatotropin precursor (Growth hormone). | | | | | | | | | |
| GN | GH1 OR GH. | | | | | | | | | |
| OC | Canis familiaris (Dog). | | | | | | | | | |
| OC | Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; | | | | | | | | | |
| OC | Mammalia; Eutheria; Carnivora; Fissipedia; Felidae; Canis. | | | | | | | | | |
| OX | NCBI_TAXID:9615; | | | | | | | | | |
| RN | [1] | | | | | | | | | |
| RP | SEQUENCE FROM N.A. | | | | | | | | | |
| RA | Ascacio-Martinez J.A., PubMed=8206387; | | | | | | | | | |
| RA | Medline=94266166; | | | | | | | | | |
| RA | "A dog growth hormone" cDNA codes for a mature protein identical to | | | | | | | | | |
| RT | "pig growth hormone". | | | | | | | | | |
| RT | van Leeuwen I.S., Teske E., van Garderen E., Ruttenman G.R., Mol J.A.; | | | | | | | | | |
| RT | "Extrapituitary growth hormone expression in the dog is initiated at the normal pituitary transcription start site in the mammary gland and at multiple upstream sites in lymphoid cells." | | | | | | | | | |
| RT | Submitted (MAR-1997) to the EMBL/GenBank/DDBJ databases. | | | | | | | | | |
| RN | [3] | | | | | | | | | |
| RP | SEQUENCE FROM N.A. | | | | | | | | | |
| RC | TISSUE-Mammary Gland; | | | | | | | | | |
| RA | Medline=99337113; PubMed=10411306; | | | | | | | | | |
| RA | Lanting-van Leeuwen I.S., Oudshoorn M., Mol J.A.; | | | | | | | | | |
| RT | "Canine mammary growth hormone gene transcription initiates at the pituitary-specific start site in the absence of Pit-1."; | | | | | | | | | |
| RT | Endocrinol. 150:121-128 (1999). | | | | | | | | | |
| RL | | | | | | | | | | |
| RP | SEQUENCE FROM N.A. | | | | | | | | | |
| RC | TISSUE-Mammary Gland; | | | | | | | | | |
| RA | Medline=99337113; PubMed=10411306; | | | | | | | | | |
| RA | Lanting-van Leeuwen I.S., Oudshoorn M., Mol J.A.; | | | | | | | | | |
| RT | "Canine mammary growth hormone gene transcription initiates at the pituitary-specific start site in the absence of Pit-1."; | | | | | | | | | |
| RT | Endocrinol. 150:121-128 (1999). | | | | | | | | | |
| CC | -!- FUNCTION: GROWTH HORMONE PLAYS AN IMPORTANT ROLE IN GROWTH | | | | | | | | | |
| CC | CONTROL. | | | | | | | | | |
| CC | -!- SUBCELLULAR LOCATION: Secreted. | | | | | | | | | |
| CC | -!- SIMILARITY: BELONGS TO THE SOMATOTROPIN/PROLACTIN FAMILY. | | | | | | | | | |
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| CC | CC -!- FUNCTION: GROWTH HORMONE PLAYS AN IMPORTANT ROLE IN GROWTH | | | | | | | | | |
| CC | CC -!- SUBCELLULAR LOCATION: Secreted. | | | | | | | | | |
| CC | CC -!- SIMILARITY: BELONGS TO THE SOMATOTROPIN/PROLACTIN FAMILY. | | | | | | | | | |
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| CC | CC -!- FUNCTION: GROWTH HORMONE PLAYS AN IMPORTANT ROLE IN GROWTH | | | | | | | | | |
| CC | CC -!- SUBCELLULAR LOCATION: Secreted. | | | | | | | | | |
| CC | CC -!- SIMILARITY: BELONGS TO THE SOMATOTROPIN/PROLACTIN FAMILY. | | | | | | | | | |
| CC | CC -!- FUNCTION: GROWTH HORMONE PLAYS AN IMPORTANT ROLE IN GROWTH | | | | | | | | | |
| CC | CC -!- SUBCELLULAR LOCATION: Secreted. | | | | | | | | | |
| CC | CC -!- SIMILARITY: BELONGS TO THE SOMATOTROPIN/PROLACTIN FAMILY. | | | | | | | | | |
| CC | CC -!- FUNCTION: GROWTH HORMONE PLAYS AN IMPORTANT ROLE IN GROWTH | | | | | | | | | |
| CC | CC -!- SUBCELLULAR LOCATION: Secreted. | | | | | | | | | |
| CC | CC -!- SIMILARITY: BELONGS TO THE SOMATOTROPIN/PROLACTIN FAMILY. | | | | | | | | | |
| CC | CC -!- FUNCTION: GROWTH HORMONE PLAYS AN IMPORTANT ROLE IN GROWTH | | | | | | | | | |
| CC | CC -!- SUBCELLULAR LOCATION: Secreted. | | | | | | | | | |
| CC | CC -!- SIMILARITY: BELONGS TO THE SOMATOTROPIN/PROLACTIN FAMILY. | | | | | | | | | |
| CC | CC -!- FUNCTION: GROWTH HORMONE PLAYS AN IMPORTANT ROLE IN GROWTH | | | | | | | | | |
| CC | CC -!- SUBCELLULAR LOCATION: Secreted. | | | | | | | | | |
| CC | CC -!- SIMILARITY: BELONGS TO THE SOMATOTROPIN/PROLACTIN FAMILY. | | | | | | | | | |
| CC | CC -!- FUNCTION: GROWTH HORMONE PLAYS AN IMPORTANT ROLE IN GROWTH | | | | | | | | | |
| CC | CC -!- SUBCELLULAR LOCATION: Secreted. | | | | | | | | | |
| CC | CC -!- SIMILARITY: BELONGS TO THE SOMATOTROPIN/PROLACTIN FAMILY. | | | | | | | | | |
| CC | CC -!- FUNCTION: GROWTH HORMONE PLAYS AN IMPORTANT ROLE IN GROWTH | | | | | | | | | |
| CC | CC -!- SUBCELLULAR LOCATION: Secreted. | | | | | | | | | |
| CC | CC -!- SIMILARITY: BELONGS TO THE SOMATOTROPIN/PROLACTIN FAMILY. | | | | | | | | | |
| CC | CC -!- FUNCTION: GROWTH HORMONE PLAYS AN IMPORTANT ROLE IN GROWTH | | | | | | | | | |
| CC | CC -!- SUBCELLULAR LOCATION: Secreted. | | | | | | | | | |
| CC | CC -!- SIMILARITY: BELONGS TO THE SOMATOTROPIN/PROLACTIN FAMILY. | | | | | | | | | |
| CC | CC -!- FUNCTION: GROWTH HORMONE PLAYS AN IMPORTANT ROLE IN GROWTH | | | | | | | | | |
| CC | CC -!- SUBCELLULAR LOCATION: Secreted. | | | | | | | | | |
| CC | CC -!- SIMILARITY: BELONGS TO THE SOMATOTROPIN/PROLACTIN FAMILY. | | | | | | | | | |
| CC | CC -!- FUNCTION: GROWTH HORMONE PLAYS AN IMPORTANT ROLE IN GROWTH | | | | | | | | | |
| CC | CC -!- SUBCELLULAR LOCATION: Secreted. | | | | | | | | | |
| CC | CC -!- SIMILARITY: BELONGS TO THE SOMATOTROPIN/PROLACTIN FAMILY. | | | | | | | | | |
| CC | CC -!- FUNCTION: GROWTH HORMONE PLAYS AN IMPORTANT ROLE IN GROWTH | | | | | | | | | |
| CC | CC -!- SUBCELLULAR LOCATION: Secreted. | | | | | | | | | |
| CC | CC -!- SIMILARITY: BELONGS TO THE SOMATOTROPIN/PROLACTIN FAMILY. | | | | | | | | | |
| CC | CC -!- FUNCTION: GROWTH HORMONE PLAYS AN IMPORTANT ROLE IN GROWTH | | | | | | | | | |
| CC | CC -!- SUBCELLULAR LOCATION: Secreted. | | | | | | | | | |
| CC | CC -!- SIMILARITY: BELONGS TO THE SOMATOTROPIN/PROLACTIN FAMILY. | | | | | | | | | |
| CC | CC -!- FUNCTION: GROWTH HORMONE PLAYS AN IMPORTANT ROLE IN GROWTH | | | | | | | | | |
| CC | CC -!- SUBCELLULAR LOCATION: Secreted. | | | | | | | | | |
| CC | CC -!- SIMILARITY: BELONGS TO THE SOMATOTROPIN/PROLACTIN FAMILY. | | | | | | | | | |
| CC | CC -!- FUNCTION: GROWTH HORMONE PLAYS AN IMPORTANT ROLE IN GROWTH | | | | | | | | | |
| CC | CC -!- SUBCELLULAR LOCATION: Secreted. | | | | | | | | | |
| CC | CC -!- SIMILARITY: BELONGS TO THE SOMATOTROPIN/PROLACTIN FAMILY. | | | | | | | | | |
| CC | CC -!- FUNCTION: GROWTH HORMONE PLAYS AN IMPORTANT ROLE IN GROWTH | | | | | | | | | |
| CC | CC -!- SUBCELLULAR LOCATION: Secreted. | | | | | | | | | |
| CC | CC -!- SIMILARITY: BELONGS TO THE SOMATOTROPIN/PROLACTIN FAMILY. | | | | | | | | | |
| CC | CC -!- FUNCTION: GROWTH HORMONE PLAYS AN IMPORTANT ROLE IN GROWTH | | | | | | | | | |
| CC | CC -!- SUBCELLULAR LOCATION: Secreted. | | | | | | | | | |
| CC | CC -!- SIMILARITY: BELONGS TO THE SOMATOTROPIN/PROLACTIN FAMILY. | | | | | | | | | |
| CC | CC -!- FUNCTION: GROWTH HORMONE PLAYS AN IMPORTANT ROLE IN GROWTH | | | | | | | | | |
| CC | CC -!- SUBCELLULAR LOCATION: Secreted. | | | | | | | | | |
| CC | CC -!- SIMILARITY: BELONGS TO THE SOMATOTROPIN/PROLACTIN FAMILY. | | | | | | | | | |
| CC | CC -!- FUNCTION: GROWTH HORMONE PLAYS AN IMPORTANT ROLE IN GROWTH | | | | | | | | | |
| CC | CC -!- SUBCELLULAR LOCATION: Secreted. | | | | | | | | | |
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| CC | CC -!- FUNCTION: GROWTH HORMONE PLAYS AN IMPORTANT ROLE IN GROWTH | | | | | | | | | |
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| CC | CC -!- SIMILARITY: BELONGS TO THE SOMATOTROPIN/PROLACTIN FAMILY. | | | | | | | | | |
| CC | CC -!- FUNCTION: GROWTH HORMONE PLAYS AN IMPORTANT ROLE IN GROWTH | | | | | | | | | |
| CC | CC -!- SUBCELLULAR LOCATION: Secreted. | | | | | | | | | |
| CC | CC -!- SIMILARITY: BELONGS TO THE SOMATOTROPIN/PROLACTIN FAMILY. | | | | | | | | | |
| CC | CC -!- FUNCTION: GROWTH HORMONE PLAYS AN IMPORTANT ROLE IN GROWTH | | | | | | | | | |
| CC | CC -!- SUBCELLULAR LOCATION: Secreted. | | | | | | | | | |
| CC | CC -!- SIMILARITY: BELONGS TO THE SOMATOTROPIN/PROLACTIN FAMILY. | | | | | | | | | |
| CC | CC -!- FUNCTION: GROWTH HORMONE PLAYS AN IMPORTANT ROLE IN GROWTH | | | | | | | | | |
| CC | CC -!- SUBCELLULAR LOCATION: Secreted. | | | | | | | | | |
| CC | CC -!- SIMILARITY: BELONGS TO THE SOMATOTROPIN/PROLACTIN FAMILY. | | | | | | | | | |
| CC | CC -!- FUNCTION: GROWTH HORMONE PLAYS AN IMPORTANT ROLE IN GROWTH | | | | | | | | | |
| CC | CC -!- SUBCELLULAR LOCATION: Secreted. | | | | | | | | | |
| CC | CC -!- SIMILARITY: BELONGS TO THE SOMATOTROPIN/PROLACTIN FAMILY. | | | | | | | | | |
| CC | CC -!- FUNCTION: GROWTH HORMONE PLAYS AN IMPORTANT ROLE IN GROWTH | | | | | | | | | |
| CC | CC -!- SUBCELLULAR LOCATION: Secreted. | | | | | | | | | |
| CC | CC -!- SIMILARITY: BELONGS TO THE SOMATOTROPIN/PROLACTIN FAMILY. | | | | | | | | | |
| CC | CC -!- FUNCTION: GROWTH HORMONE PLAYS AN IMPORTANT ROLE IN GROWTH | | | | | | | | | |
| CC | CC -!- SUBCELLULAR LOCATION: Secreted. | | | | | | | | | |
| CC | CC -!- SIMILARITY: BELONGS TO THE SOMATOTROPIN/PROLACTIN FAMILY. | | | | | | | | | |
| CC | CC -!- FUNCTION: GROWTH HORMONE PLAYS AN IMPORTANT ROLE IN GROWTH | | | | | | | | | |
| CC | CC -!- SUBCELLULAR LOCATION: Secreted. | | | | | | | | | |
| CC | CC -!- SIMILARITY: BELONGS TO THE SOMATOTROPIN/PROLACTIN FAMILY. | | | | | | | | | |
| CC | CC -!- FUNCTION: GROWTH HORMONE PLAYS AN IMPORTANT ROLE IN GROWTH | | | | | | | | | |
| CC | CC -!- SUBCELLULAR LOCATION: Secreted. | | | | | | | | | |
| CC | CC -!- SIMILARITY: BELONGS TO THE SOMATOTROPIN/PROLACTIN FAMILY. | | | | | | | | | |
| CC | CC -!- FUNCTION: GROWTH HORMONE PLAYS AN IMPORTANT ROLE IN GROWTH | | | | | | | | | |
| CC | CC -!- SUBCELLULAR LOCATION: Secreted. | | | | | | | | | |
| CC | CC -!- SIMILARITY: BELONGS TO THE SOMATOTROPIN/PROLACTIN FAMILY. | | | | | | | | | |
| CC | CC -!- FUNCTION: GROWTH HORMONE PLAYS AN IMPORTANT ROLE IN GROWTH | | | | | | | | | |
| CC | CC -!- SUBCELLULAR LOCATION: Secreted. | | | | | | | | | |
| CC | CC -!- SIMILARITY: BELONGS TO THE SOMATOTROPIN/PROLACTIN FAMILY. | | | | | | | | | |
| CC | CC -!- FUNCTION: GROWTH HORMONE PLAYS AN IMPORTANT ROLE IN GROWTH | | | | | | | | | |
| CC | CC -!- SUBCELLULAR LOCATION: Secreted. | | | | | | | | | |
| CC | CC -!- SIMILARITY: BELONGS TO THE SOMATOTROPIN/PROLACTIN FAMILY. | | | | | | | | | |
| CC | CC -!- FUNCTION: GROWTH HORMONE PLAYS AN IMPORTANT ROLE IN GROWTH | | | | | | | | | |
| CC | CC -!- SUBCELLULAR LOCATION: Secreted. | | | | | | | | | |
| CC | CC -!- SIMILARITY: BELONGS TO THE SOMATOTROPIN/PROLACTIN FAMILY. | | | | | | | | | |
| CC | CC -!- FUNCTION: GROWTH HORMONE PLAYS AN IMPORTANT ROLE IN GROWTH | | | | | | | | | |
| CC | CC -!- SUBCELLULAR LOCATION: Secreted. | | | | | | | | | |
| CC | CC -!- SIMILARITY: BELONGS TO THE SOMATOTROPIN/PROLACTIN FAMILY. | | | | | | | | | |
| CC | CC -!- FUNCTION: GROWTH HORMONE PLAYS AN IMPORTANT ROLE IN GROWTH | | | | | | | | | |
| CC | CC -!- SUBCELLULAR LOCATION: Secreted. | | | | | | | | | |
| CC | CC -!- SIMILARITY: BELONGS TO THE SOMATOTROPIN/PROLACTIN FAMILY. | | | | | | | | | |
| CC | CC -!- FUNCTION: GROWTH HORMONE PLAYS AN IMPORTANT ROLE IN GROWTH | | | | | | | | | |
| CC | CC -!- SUBCELLULAR LOCATION: Secreted. | | | | | | | | | |
| CC | CC -!- SIMILARITY: BELONGS TO THE SOMATOTROPIN/PROLACTIN FAMILY. | | | | | | | | | |
| CC | CC -!- FUNCTION: GROWTH HORMONE PLAYS AN IMPORTANT ROLE IN GROWTH | | | | | | | | | |
| CC | CC -!- SUBCELLULAR LOCATION: Secreted. | | | | | | | | | |
| CC | CC -!- SIMILARITY: BELONGS TO THE SOMATOTROPIN/PROLACTIN FAMILY. | | | | | | | | | |

Query Match 59.2%; Score 51.5.; DB 1; Length 216;
 Best Local Similarity 58.8%; Pred. No. 0.32;
 Matches 10; Conservative 3; Mismatches 1; Gaps 1;

Qy 1 YLRVQCRS-VEGSCGF 16
 Db 200 YLRVMKCRREVSSCAF 216

RESULT 16

SONA_HORSE STANDARD; PRT; 216 AA.

ID SONA_HORSE
 AC P01245;
 DT 21-JUL-1986 (Rel. 01, Created)
 DT 01-NOV-1995 (Rel. 32, Last sequence update)
 DT 01-FEB-1996 (Rel. 33, Last annotation update)
 DE Somatotropin precursor (Growth hormone).
 GN GH1.
 OS Equus caballus (Horse).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Perissodactyla; Equidae; Equus.
 OC NCBI_TAXID=9796;

RN [1]
 RP SEQUENCE FROM N.A.
 RC TISSUE="pituitary";
 RX MEDLINE=94266171; PubMed=8206392;

RA Ascaso-Martinez J.A., Barrera-Saldana H.A.;
 PT "Sequence of cDNA encoding horse growth hormone.";
 RT Gene 143:299-300(1994).

RN [2]
 RP SEQUENCE OF 27-216.
 RX MEDLINE=/7003410; PubMed=965151;
 RA Zakin M.M., Poskus E., Langton A.A., Ferrara P., Santome J.A.,
 RA DellaChia J.M., Paladini A.C.;

RT "Primary structure of equine growth hormone.";
 RT [3]
 RP PRELIMINARY SEQUENCE OF 27-216.
 RX MEDLINE=74023362; PubMed=474849;
 RA Zakin M.M., Poskus E., DellaChia J.M., Paladini A.C., Santome J.A.;
 RT "The amino acid sequence of equine growth hormone.";
 RL FEBS Lett. 34:353-355(1973).

RN [4]
 RP SEQUENCE OF 68-95 AND 183-216.
 RT "Amino acid sequences around the cystine residues in equine growth
 hormone.";
 RT [5]
 RP SEQUENCE OF 202-216.
 RX MEDLINE=6836390; PubMed=4876100;
 RA Oliver L., Hartree A.S.;
 RT "Amino acid sequences around the cystine residues in horse growth
 hormone.";
 RL Biochem. J. 109:19-24(1968).
 RT -!- FUNCTION: GROWTH HORMONE PLAYS AN IMPORTANT ROLE IN GROWTH
 CC CONTROL.
 CC -!- SUBCELLULAR LOCATION: Secreted.
 CC -!- SIMILARITY: BELONGS TO THE SOMATOTROPIN/PROLACTIN FAMILY.

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 CC or send an email to license@isb-sib.ch).

CC DR EMBL: S662099; AAB20368.1; -.
 DR PIR; B49159; B49159.
 DR HSSP; P01246; IBST.
 DR InterPro; IPR001400; SOMATOTROPIN.
 DR Pfam; P00103; hormone; 1.
 DR PRINS; PRO0836; SOMATOTROPIN.
 DR PROSITE; P500266; SOMATOTROPIN.1.
 DR PROSITE; P500338; SOMATOTROPIN.2; 1.
 DR SIGNAL 1 26 BY SIMILARITY.
 DR Hormone; Pituitary; Signal.
 DR CHAIN 27 216 BY SIMILARITY.
 DR DISULFID 78 189 BY SIMILARITY.
 DR DISULFID 206 214 BY SIMILARITY.
 DR SEQUENCE 216 AA; 24423 MW; 37AB3173834D11AC CRC64;

DR PIR; U02929; AA21027.1; -.
 DR HSSP; A01514; STRHO.
 DR P01246; IBST.
 DR InterPro; IPR001400; SOMATOTROPIN.

Query Match 59.2%; Score 51.5.; DB 1; Length 216;
 Best Local Similarity 58.8%; Pred. No. 0.32;

Matches 10; Conservative 3; Mismatches 3; Indels 1; Gaps 1; Score 51.5; DB 1; Length 216; Best Local Similarity 58.8%; Pred. No. 0.32; Matches 10; Conservative 3; Mismatches 3; Indels 1; Gaps 1;

Query Match 59.2%; Score 51.5; DB 1; Length 216; Best Local Similarity 58.8%; Pred. No. 0.32; Matches 10; Conservative 3; Mismatches 3; Indels 1; Gaps 1;

Qy 1 YLRIVQCRS-VEGSCGF 16
Db 200 YLRVMKCRRFVESSCAF 216

RESULT 18

SOMA_MOUSE STANDARD; PRT; 216 AA.

AC P06880;
DT 01-JAN-1988 (Rel. 06, Created)
DT 01-JAN-1988 (Rel. 06, Last sequence update)
DT 15-JUL-1998 (Rel. 36, Last annotation update)
DE Somatotropin precursor (Growth hormone).
GN GH1 OR GH.
OC Mus musculus (Mouse).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Carnivora; Fissipedia; Mustelinae; Mustela.
OX NCBI_TaxID=10090;
RN RP SEQUENCE FROM N.A.
RX MEDLINE=85261358; PubMed=2991252;
RA Linzer D.I.H., Salamanca F.;
RT "Nucleotide sequence of mouse prolactin and growth hormone mRNAs and expression of these mRNAs during pregnancy.";
RL J. Biol. Chem. 260:9574-9579(1985).
RN RP SEQUENCE FROM N.A.
RC STRAIN=FZIDU; TISSUE=Liver;
RX MEDLINE=96194803; PubMed=8547448;
RA Das P., Meyer L., Seifert H.-M., Brockmann G., Schwerin M.;
RT "Structure of the growth hormone-encoding gene and its promoter in mice.";
RL Gene 169: 209-213(1996).
CC -!- FUNCTION: GROWTH HORMONE PLAYS AN IMPORTANT ROLE IN GROWTH CONTROL.
CC -!- SUBCELLULAR LOCATION: Secreted.
CC -!- SIMILARITY: BELONGS TO THE SOMATOTROPIN/PROLACTIN FAMILY.
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CC DR EMBL; X02891; CAA26650.1; .
CC DR EMBL; M29606; CAA86658.1; .
CC DR PIR; B23911; STMS.
CC DR HSSP; P01246; 1BSP.
CC DR InterPro; IPR001400; SOMATOTROPIN.
CC DR PF00103; Hormone_1.
CC DR PRINTS; PRO0836; SOMATOTROPIN.
CC DR PROSITE; PS00266; SOMATOTROPIN_1; 1.
CC DR PROSITE; PS00338; SOMATOTROPIN_2; 1.
CC KW Hormone; Pituitary; Signal.
FT SIGNAL_1 26 BY SIMILARITY.
FT CHAIN_27 216 BY SIMILARITY.
FT DISULFID_78 189 BY SIMILARITY.
FT DISULFID_206 214 BY SIMILARITY.
SQ SEQUENCE 216 AA: 24716 MW; 986663AAE25D65PC CRC64;

Query Match 59.2%; Score 51.5; DB 1; Length 216; Best Local Similarity 58.8%; Pred. No. 0.32; Matches 10; Conservative 3; Mismatches 3; Indels 1; Gaps 1;

Qy 1 YLRIVQCRS-VEGSCGF 16
Db 200 YLRVMKCRRFVESSCAF 216

DR EMBL; AF292938; AAG44952.1; -
 DR InterPro; IPR001400; SOMATOTROPIN.
 DR Pfam; PF00103; hormone; 1.
 DR PRINTS; PRO0836; SOMATOTROPIN.
 DR PROSITE; PS00266; SOMATOTROPIN_1; 1.
 DR PROSITE; PS00338; SOMATOTROPIN_2; 1.
 KW Hormone; Pituitary; Signal.
 FT SIGNAL 1 26 BY SIMILARITY.
 CHAIN 27 SOMATOTROPIN.
 FT DISULFID 79 190 BY SIMILARITY.
 FT DISULFID 207 24481 MW; 2FB61CD31136F005 CRC64;
 SQ SEQUENCE 217 AA; 2FB61CD31136F005 CRC64;

Query Match 59.28; Score 51.5; DB 1; Length 217;
 Best Local Similarity 58.8%; Pred. No. 0.32;
 Matches 10; Conservative 3; Mismatches 3; Indels 1; Gaps 1;
 RN [1];

Qy 1 YLRIVQCRS-VBGSCGF 16
 Db 201 YLRVMKCRFVESSCAF 217

RESULT 23
 SOMA_RABBIT STANDARD; PRT; 216 AA.
 ID SOMA_RABBIT
 AC P46407;
 DT 01-NOV-1995 (Rel. 32, Created)
 DT 01-NOV-1995 (Rel. 32, Last sequence update)
 DT 01-FEB-1996 (Rel. 33, Last annotation update)
 DE Somatotropin precursor (Growth hormone).
 GN GH1.
 OS Oryctolagus cuniculus (Rabbit).
 OC Aethriomys; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Lagomorpha; Leporidae; Oryctolagidae.
 RN [1];
 RP SEQUENCE FROM N.A.
 RC STRAIN NEW ZEALAND WHITE;
 RX PDBLINE-96011643; Pubmed-7590276;
 RA Wallis O.C.; Wallis M.;
 RT "Cloning and characterisation of the rabbit growth hormone-encoding
 gene."
 RT RL 163:253-256(1995).
 CC - I - FUNCTION: GROWTH HORMONE PLAYS AN IMPORTANT ROLE IN GROWTH
 CC - I - SUBCELLULAR LOCATION: Secreted.
 CC - I - SIMILARITY: BELONGS TO THE SOMATOTROPIN/PROLACTIN FAMILY.
 CC - I -
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 CC or send an email to license@isb-sib.ch).
 CC DR EMBL; Z38127; CAR86287.1; -
 CC DR HSSP; P01246; 1B5T;
 CC DR InterPro; IPR001400; SOMATOTROPIN.
 CC DR Pfam; PF00103; hormone; 1.
 CC DR PROSITE; PRO0836; SOMATOTROPIN.
 CC DR PROSITE; PS00266; SOMATOTROPIN_1; 1.
 CC KW Hormone; Pituitary; Signal.
 CC FT SIGNAL 1 26 BY SIMILARITY.
 CC FT CHAIN 27 216 SOMATOTROPIN.
 CC FT DISULFID 78 189 BY SIMILARITY.
 CC SQ SEQUENCE 216 AA; 24433 MW; GEC19748199F9D75 CRC64;

Query Match 55.78; Score 48.5; DB 1; Length 216;
 Best Local Similarity 58.8%; Pred. No. 0.94; 3; Mismatches 3; Indels 1; Gaps 1;

Qy 1 YLRIVQCRS-VBGSCGF 16
 Db 200 YLRVMKCRFVESSCAF 216

RESULT 24
 SOMA_RAT STANDARD; PRT; 216 AA.
 ID SOMA_RAT
 AC P01244;
 DT 21-JUL-1986 (Rel. 01, Created)
 DT 01-NOV-1997 (Rel. 35, Last annotation update)
 DE Somatotropin precursor (Growth hormone).
 GN GH1 OR GH.

Query Match 59.28; Score 51.5; DB 1; Length 217;
 Best Local Similarity 58.8%; Pred. No. 0.32; 3; Mismatches 3; Indels 1; Gaps 1;

| | | | |
|----|---|--|--------------------------|
| OS | Rattus norvegicus (Rat). | Db | 200 YLRVMKCRRAESSCAF 216 |
| OC | Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; | | |
| OC | Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Rattus. | | |
| OX | NCBI_TAXID=10116; | | |
| RN | [1] | RESULT 25 | |
| RP | SEQUENCE FROM N.A. | ID SONA_BOVIN STANDARD; | PT; |
| RX | MEDLINE=8205526; PubMed=6272224; | PT; 217 AA. | |
| RA | Smith S., Goodman H.M.; | AC P01246; Q88117; | |
| RT | "DNA sequence of the rat growth hormone gene: location of the 5' terminus of the growth hormone mRNA and identification of an internal transposon-like element." | AC Rel. 01, Created) | |
| RT | Nucleic Acids Res. 9:2087-2104(1981). | DT 21-JUL-1986 (Rel. 01, Last sequence update) | |
| RL | | DT 15-DEC-1998 (Rel. 37, Last annotation update) | |
| RN | [2] | DE Sonatotropin precursor (Growth hormone). | |
| RP | SEQUENCE FROM N.A. | GN GH1 OR GH | |
| RX | MEDLINE=78071760; PubMed=339105; | OS Bos taurus (Bovine). | |
| RA | Seeburg P.H., Shine J., Martial J.A., Baxter J.D., Goodman H.M.; | OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; | |
| RT | "Nucleotide sequence and amplification in bacteria of structural gene for rat growth hormone." | OC Mammalia; Eutheria; Chordata; Craniata; Vertebrata; Bovidae; | |
| RL | Nature 270:486-494(1977). | OC Bovidae; Cetartiodactyla; Ruminantia; Pecora; Bovidae; | |
| RN | [3] | OC Bovinae; Bos. | |
| RP | SEQUENCE FROM N.A. | OC | |
| RC | TISSUE=Liver; | RT Miller W.L., Martial J.A., Baxter J.D.; | |
| RX | MEDLINE=82060155; PubMed=6946433; | RT "Molecular cloning of DNA complementary to bovine growth hormone mRNA". | |
| RA | Barta A., Richards R.I., Baxter J.D., Shine J.; | RL J. Biol. Chem. 255:7521-7524(1980). | |
| RT | "Primary structure and evolution of rat growth hormone gene." | RN [1] | |
| RL | Proc. Natl. Acad. Sci. U.S.A. 78:4867-4871(1981). | RP SEQUENCE FROM N.A. | |
| RN | [4] | RX MEDLINE=83209123; PubMed=6303731; | |
| RP | SEQUENCE FROM N.A. | RA Seeburg P.H., Siss S., Adelman J.J., de Boer H.A., Hayflick J.J., | |
| RC | STRAIN=SPRAGUE-DAWLEY; | RA Jhurani P., Goeddel D.V., Heyneker H.L.; | |
| RX | MEDLINE=96056604; PubMed=8521139. | RT "Efficient bacterial expression of bovine and porcine growth | |
| RA | Rohn W.M., Weigent D.A.; | RT hormones". | |
| RT | "Cloning and nucleotide sequencing of rat lymphocyte growth hormone." | RL DNA 2:37-45(1983). | |
| RT | cDNA;" | RN [3] | |
| RL | RNA immunomodulation 2:108-114(1995). | RP SEQUENCE FROM N.A. | |
| CC | -1- FUNCTION: GROWTH HORMONE PLAYS AN IMPORTANT ROLE IN GROWTH | RC TISSUE=Liver; | |
| CC | CONTROL. | RX MEDLINE=84058733; PubMed=6357899; | |
| CC | -1- SUBCELLULAR LOCATION: Secreted. | RA Gordon D.F., Quirk D.P., Erwin C.R., Donelson J.E., Maurer R.A.; | |
| CC | -1- SIMILARITY: BELONGS TO THE SOMATOTROPIN/PROLACTIN FAMILY. | RT "Nucleotide sequence of the bovine growth hormone chromosomal gene." | |
| CC | ----- | RL Mol. Cell. Endocrinol. 33:91-95(1983). | |
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| CC | ----- | RP SEQUENCE FROM N.A. | |
| DR | EMBL; V01237; CAA24547.1; | RC STRAIN=NELORE; TISSUE=Pituitary; | |
| DR | EMBL; V01238; CAA24548.1; | RA Rubtsov P.M., Chernov B.K., Gorbulev V.G., Parsadanyan A.S.; | |
| DR | EMBL; V01239; CAA24549.1; | RA Sverdlova P.S., Chupreeva V.V., Golova Y.B., Batchikova N.V.; | |
| DR | EMBL; 062779; AAB04025.1; | RA Zivibrilis G.S., Skryabin K.G., Baev A.A.; | |
| DR | PIR; A01513; START, | RT "Genetic engineering of peptide hormones". | |
| DR | HSSP; P01246; 18ST. | RL Mol. Biol. (Mosk) 19:226-235(1985). | |
| DR | InterPro; IPR001400; SOMATOTROPIN. | RN [5] | |
| FT | SIGNAL 1 26 | RP SEQUENCE FROM N.A. | |
| FT | CHAIN 27 216 SOMATOTROPIN. | RC TISSUE=Pituitary; | |
| FT | PRINTS; PRO00836; SOMATOTROPIN. | RA Meuro S.M.Z., Ferro M.I.T., Macari M., Ferro J.A.; | |
| DR | PROSITE; PS00266; SOMATOTROPIN_1; 1. | RT "The complete sequence of a cDNA encoding the bovine growth hormone." | |
| DR | PROSITE; PS00338; SOMATOTROPIN_2; 1. | RL Submitted (Nov-1997) to the EMBL/GenBank/DBJ databases. | |
| DR | HORMONE; P01247; START. | RN [6] | |
| DR | InterPro; IPR001400; SOMATOTROPIN. | RP SEQUENCE. | |
| DR | PFAM; PF00103; hormone_1. | RC MEDLINE=74028758; PubMed=4584625; | |
| DR | PRINTS; PRO00836; SOMATOTROPIN. | RA Wallis M.; | |
| DR | DISULFID 78 189 BY SIMILARITY. | RT "The primary structure of bovine growth hormone." | |
| DR | DISULFID 206 214 BY SIMILARITY. | RL FEBS Lett. 35:11-14(1973). | |
| FT | CONFLICT 27 27 F->L (IN REF. 2 AND 4). | RN [7] | |
| SQ | SEQUENCE 216 AA; 24656 MW; CABFE49DC0B2A226C CRC64; | RP SEQUENCE. | |
| RX | | RC MEDLINE=73249153; PubMed=4580883; | |
| RA | | RA Santome J.A., Dellacha J.M., Paladini A.C., Pena C., Biscoglio M.J.; | |
| RA | | RA Daurat S.T., Postus E., Wolfenstein C.E.M.; | |
| RT | | RT "Primary structure of bovine growth hormone." | |
| RL | | RL Eur. J. Biochem. 37:164-176(1973). | |
| RN | [9] | RN SEQUENCE OF 27-49 FROM N.A. | |
| RP | | | |

Query Match 54.6%; Score 47.5%; DB 1; Length 216;
 Best Local Similarity 52.9%; Pred. No. 1.3;
 Matches 9; Conservative 3; Mismatches 4; Gaps 1;
 Sequence 1 YLRIVQCRS-VBGSCGF 16

| | |
|------------|--|
| RX | MEDLINE=86004063; PubMed=3899556; |
| RA | George H.J., L'Italiani J.J., Glassman D.L., |
| RA | Krzyczek R.A.; |
| RT | "High level expression in <i>Escherichia coli</i> of biologically active bovine growth hormone."; |
| DN | DNA 4: 273-281(1975), |
| RN | [10] EVIDENCE FOR TWO ALLELIC CHAINS. |
| RP | MEDLINE=71207803; PubMed=5575941; |
| RA | Seavy B.K., Singh R.N.P., Lewis U.J., Geschwind I.I.; |
| RT | "Bovine growth hormone: evidence for two allelic forms."; |
| BL | Biochem. Biophys. Res. Commun. 43:189-195(1971). |
| RN | [11] CHARACTERIZATION. |
| RP | MEDLINE=71133461; PubMed=1123321; |
| RA | Yamada N., Shimanaka J., Sonnenburg M.; |
| RT | "Studies on the common active site of growth hormone. Revision of the amino acid sequence of an active fragment of bovine growth hormone."; |
| RL | J. Biol. Chem. 250:2510-2514(1975). |
| RN | [12] 3D-STRUCTURE MODELING. |
| RP | MEDLINE=91124979; PubMed=2021631; |
| RA | Cariucci L., Chou K.-C., Maggiore G.M.; |
| RT | "A heuristic approach to predicting the tertiary structure of bovine somatotropin."; |
| RL | Biochemistry 30:4389-4398(1991). |
| CC | -1- FUNCTION: GROWTH HORMONE PLAYS AN IMPORTANT ROLE IN GROWTH |
| CC | CONTROL. |
| CC | -1- SUBCELLULAR LOCATION: Secreted. |
| CC | -1- SIMILARITY: BELONGS TO THE SOMATOTROPIN/PROLACTIN FAMILY. |
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| CC | DR EMBL; J00008; AAA030542_1; -. |
| CC | DR EMBL; V00111; CAA2345_1; -. |
| CC | DR EMBL; M27325; AAA30543_1; -. |
| CC | DR EMBL; M57764; AAA30544_1; -. |
| CC | DR EMBL; M23613; AAA30556_1; -. |
| CC | DR EMBL; AF04386; AAB92549_1; -. |
| CC | DR EMBL; M11558; AAA30545_1; -. |
| CC | DR EMBL; A08489; CAA00787_1; -. |
| CC | DR PIR; A01515; STBO. |
| CC | DR PDB; 1B5T; 15-OCT-94. |
| CC | DR InterPro; IPR01400; SOMATOTROPIN. |
| CC | DR Pfam; PF00103; hormone; 1. |
| CC | DR PRINS; PR00836; SOMATOTROPIN. |
| CC | DR PROSITE; PS00266; SOMATOTROPIN_1; 1. |
| CC | DR PROSITE; PS00338; SOMATOTROPIN_2; 1. |
| CC | DR PROSTE; PS00338; SOMATOTROPIN_2; 1. |
| CC | Hormone; Pituitary; Signal; Polymorphism; 3D-structure. |
| KW | SIGNAL |
| FT | 1 27 SOMATOTROPIN. |
| FT | 28 217 SOMATOTROPIN. |
| FT | 28 190 SOMATOTROPIN. |
| FT | 207 215 L > V (IN 30% OF THE MOLECULES). |
| FT | 95 95 Q > E (IN REF. 8). |
| FT | 110 121 QSWLQPLQFLSR -> SOWLQPGFLR (IN REF. 8). |
| FT | 110 121 D -> N (IN REF. 8). |
| SEQUENCE | 194 194 D -> N (IN REF. 8). |
| SQ | 217 AA: 24558 MW; 998D8D01B852E89 CRC64; |
| RESULT | 27 |
| SOMA_CEREL | STANDARD; |
| ID | SOMA_CEREL |
| AC | P56437; |
| DT | 15-JUL-1998 (Rel. 36, Created) |
| DT | 15-JUL-1998 (Rel. 36, Last sequence update) |
| DT | 15-JUL-1998 (Rel. 36, Last annotation update) |
| DE | Somatotropin precursor (Growth hormone). |
| GN | GH. |
| OS | Cervus elaphus (Red deer). |
| RN | [13] CHARACTERIZATION. |
| RP | MEDLINE=91133461; PubMed=1123321; |
| RA | Tiwari G., Garg L.C.; |
| RT | "Cloning and characterization of growth hormone encoding gene in <i>Bubalus bubalis</i> ." |
| RT | Bubalidae; Bovidae; Bovinae; Bubalus. |
| RL | Submitted (SEP-1998) to the EMBL/GenBank/DBJ databases. |
| CC | -1- FUNCTION: GROWTH HORMONE PLAYS AN IMPORTANT ROLE IN GROWTH |
| CC | CONTROL. |
| CC | -1- SUBCELLULAR LOCATION: Secreted. |
| CC | -1- SIMILARITY: BELONGS TO THE SOMATOTROPIN/PROLACTIN FAMILY. |
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| CC | DR EMBL; AJ011533; CAA09679_1; -. |
| CC | DR EMBL; AJ011514; CAA09668_1; -. |
| CC | DR EMBL; AJ011513; CAA09667_1; -. |
| CC | DR EMBL; AJ000549; CAA04181_1; -. |
| CC | DR HSSP; P01246; 1B5T. |
| CC | DR InterPro; IPR001400; SOMATOTROPIN. |
| CC | DR Pfam; PF00103; hormone; 1. |
| CC | DR PRINS; PR00836; SOMATOTROPIN. |
| CC | DR PROSITE; PS00266; SOMATOTROPIN_1; 1. |
| CC | DR PROSITE; PS00338; SOMATOTROPIN_2; 1. |
| CC | KW Hormone; Pituitary; Signal. |
| FT | SIGNAL 1 27 BY SIMILARITY. |
| FT | CHAIN 28 217 SOMATOTROPIN. |
| FT | DISULFID 79 190 BY SIMILARITY. |
| FT | DISULFID 207 215 BY SIMILARITY. |
| SQ | SEQUENCE 217 AA: 24618 MW; 453547080E9B54EB CRC64; |
| Query | Match Score 46.5; DB 1; Length 217; |
| QY | 1 YLRIVQCRSV-EGSGF 16 |
| FT | Best Local Similarity 53.4%; Pred. No. 1.9; Mismatches 3; Indels 1; Gaps 1; |
| FT | 201 YLRIVMKRREFGEASCAF 217 |
| Db | 1 YLRIVQCRSV-EGSGF 16 |
| Db | 201 YLRIVMKRREFGEASCAF 217 |
| RESULT | 27 |
| SOMA_CEREL | STANDARD; |
| ID | SOMA_CEREL |
| AC | P56437; |
| DT | 15-JUL-1998 (Rel. 36, Created) |
| DT | 15-JUL-1998 (Rel. 36, Last sequence update) |
| DT | 15-JUL-1998 (Rel. 36, Last annotation update) |
| DE | Somatotropin precursor (Growth hormone). |
| GN | GH. |
| OS | Cervus elaphus (Red deer). |
| RN | [14] CHARACTERIZATION. |
| RP | MEDLINE=91133461; PubMed=1123321; |
| RA | Yamada N., Shimanaka J., Sonnenburg M.; |
| RT | "Studies on the common active site of growth hormone. Revision of the amino acid sequence of an active fragment of bovine growth hormone."; |
| RL | J. Biol. Chem. 250:2510-2514(1975). |
| CC | -1- FUNCTION: GROWTH HORMONE PLAYS AN IMPORTANT ROLE IN GROWTH |
| CC | CONTROL. |
| CC | -1- SUBCELLULAR LOCATION: Secreted. |
| CC | -1- SIMILARITY: BELONGS TO THE SOMATOTROPIN/PROLACTIN FAMILY. |
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| CC | DR EMBL; J00008; AAA030542_1; -. |
| CC | DR EMBL; V00111; CAA2345_1; -. |
| CC | DR EMBL; M27325; AAA30543_1; -. |
| CC | DR EMBL; M57764; AAA30544_1; -. |
| CC | DR EMBL; M23613; AAA30556_1; -. |
| CC | DR EMBL; AF04386; AAB92549_1; -. |
| CC | DR EMBL; M11558; AAA30545_1; -. |
| CC | DR EMBL; A08489; CAA00787_1; -. |
| CC | DR PIR; A01515; STBO. |
| CC | DR PDB; 1B5T; 15-OCT-94. |
| CC | DR InterPro; IPR01400; SOMATOTROPIN. |
| CC | DR Pfam; PF00103; hormone; 1. |
| CC | DR PRINS; PR00836; SOMATOTROPIN. |
| CC | DR PROSITE; PS00266; SOMATOTROPIN_1; 1. |
| CC | DR PROSITE; PS00338; SOMATOTROPIN_2; 1. |
| CC | Hormone; Pituitary; Signal; Polymorphism; 3D-structure. |
| KW | SIGNAL |
| FT | 1 27 SOMATOTROPIN. |
| FT | 28 217 SOMATOTROPIN. |
| FT | 28 190 SOMATOTROPIN. |
| FT | 207 215 L > V (IN 30% OF THE MOLECULES). |
| FT | 95 95 Q > E (IN REF. 8). |
| FT | 110 121 QSWLQPLQFLSR -> SOWLQPGFLR (IN REF. 8). |
| FT | 110 121 D -> N (IN REF. 8). |
| SEQUENCE | 194 194 D -> N (IN REF. 8). |
| SQ | 217 AA: 24558 MW; 998D8D01B852E89 CRC64; |
| Query | Match Score 53.4%; DB 1; Length 217; |
| QY | 1 YLRIVQCRSV-EGSGF 16 |
| FT | Best Local Similarity 52.9%; Pred. No. 1.9; Mismatches 3; Indels 1; Gaps 1; |
| FT | 201 YLRIVMKRREFGEASCAF 217 |
| Db | 1 YLRIVQCRSV-EGSGF 16 |
| Db | 201 YLRIVMKRREFGEASCAF 217 |
| RESULT | 27 |
| SOMA_CEREL | STANDARD; |
| ID | SOMA_CEREL |
| AC | P56437; |
| DT | 15-JUL-1998 (Rel. 36, Created) |
| DT | 15-JUL-1998 (Rel. 36, Last sequence update) |
| DT | 15-JUL-1998 (Rel. 36, Last annotation update) |
| DE | Somatotropin precursor (Growth hormone). |
| GN | GH. |
| OS | Cervus elaphus (Red deer). |

OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Cervidae; Cervidae; Cervinae; Cervus.

OC NCBI_TAXID=9860; [1]

OX RP SEQUENCE FROM N.A.

RC TISSUE-Tongue; Lioupis A., Wallis O.C., Wallis M.; Submitted (MAY-1997) to the EMBL/GenBank/DDBJ databases. **FUNCTION: GROWTH HORMONE PLAYS AN IMPORTANT ROLE IN GROWTH CONTROL.**

CC -!- SUBCELLULAR LOCATION: Secreted.

CC -!- SIMILARITY: BELONGS TO THE SOMATOTROPIN/PROLACTIN FAMILY.

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CC DR EMBL; Y12578; CAA73158; 1; -; HSSP; P01246; 1B5T; InterPro; IPR001400; SOMATOTROPIN. PFam; PF00103; PR00336; SOMATOTROPIN.

DR PROSITE; PS00266; SOMATOTROPIN_1; 1; DR PROSITE; PS00338; SOMATOTROPIN_2; 1; KW Hormone; Pituitary; Signal.

FT SIGNAL 1 27 BY SIMILARITY.

FT CHAIN 28 217 BY SIMILARITY.

FT DISULFID 79 190 BY SIMILARITY.

FT DISULFID 207 215 BY SIMILARITY.

FT SEQUENCE 217 AA; 24558 MW; 6F22D5241468B7AD CRC64;

Qy 1 YLRIVQCRSV-EGSGF 16

Db 201 YLRVVKCRFGEASCAF 217

RESULT 28

ISOMA_SHEEP STANDARD; PRT; 217 AA.

ID P01247; P07289; Q29404; DT 21-JUL-1986 (Rel. 01, Created)

DT 01-NOV-1988 (Rel. 09, Last sequence update)

DT 16-OCT-2001 (Rel. 40, Last annotation update)

DE Somatotropin precursor (Growth hormone).

GN GH1.

OS Ovis aries (Sheep), capra hircus (Goat), and bubalis bubalis (Domestic water buffalo).

OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovidae; Bovidae; Caprinae; Ovis.

NCBT_TaxID=9940, 9925, 89462; [1]

RP SEQUENCE FROM N.A.

RC SPECIES=Sheep; MEDLINE=89016583; PubMed=317441; ORIAN J.M., O'Mahoney J.V., Brandon M.R.; "Cloning and sequencing of the ovine growth hormone gene." Nucleic Acids Res. 16:9046-9046(1988).

RN SEQUENCE FROM N.A.

RC SPECIES=Sheep; MEDLINE=89287334; PubMed=2660907;

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RA Warwick J.M., Wallis O.C., Wallis M.; Cloning, sequence and expression in Escherichia coli of cDNA for ovine pregrowth hormone." Biochim. Biophys. Acta 1008:247-250(1989).

RT RT RT RT

RN [13]

RP SEQUENCE FROM N.A.

RC SPECIES=Sheep; MEDLINE=8826619; PubMed=3453044; Byrne C.R.; Wilson B.W., Ward K.A.; "The isolation and characterisation of the ovine growth hormone gene." Aust. J. Biol. Sci. 40:459-468(1987).

RT RT RT RT

RN [41]

RP SEQUENCE FROM N.A.

RC SPECIES=Sheep; TISSUE=Pituitary; MEDLINE=9303692; PubMed=1159643; Rao C., Jain S.K., Tote S.M., Talwar G.P.; "Cloning and nucleotide sequencing of sheep growth hormone cDNA." Indian J. Exp. Biol. 30:659-663(1992).

RT RT RT RT

RN [15]

RP SEQUENCE FROM N.A.

RC SPECIES=Sheep; STRAIN=AWASSI; Goowine E.; Submitted (JUL-1987) to the EMBL/GenBank/DDBJ databases.

RA RA RL RN [16]

RP SEQUENCE OF 28-217.

RC SPECIES=Sheep; MEDLINE=73220070; PubMed=4736985; Li C.H., Gordon D., Knorr J.; "The primary structure of sheep pituitary growth hormone." Arch. Biochem. Biophys. 156:493-508(1973).

RA RA RL RN [7]

RP SEQUENCE OF 150-217.

RC SPECIES=Sheep; MEDLINE=7214042; PubMed=5062423; Bellair J.T.; "Ovine growth hormone. Sequence of the C-terminal 68 amino acids." RL Biochem. Biophys. Res. Commun. 46:1128-1134(1972).

RA RA RL RN [18]

RP SEQUENCE FROM N.A.

RC SPECIES=C.hircus; STRAIN=SAANEN; MEDLINE=8817627; PubMed=3342884; Yamano Y., Oyabayashi K., Okuno M., Kioka N., Manabe E., Hashi H., Sekai H., Komano T., Utsumi K., Iritani A.; "Nucleotide sequence of cDNA that encodes goat growth hormone." RT RT RT RT RL FIBS Lett. 228:301-304(1988).

RL RN [10]

RP SEQUENCE FROM N.A.

RC SPECIES=C.hircus; MEDLINE=8823947; PubMed=3375056; Yato M., Yamano Y., Okuno M., Kioka N., Manabe E., Hashi H., Sekai H., Komano T., Utsumi K., Iritani A.; "Cloning and sequencing of goat growth hormone gene." RL Nucleic Acids Res. 16:3578-3578(1988).

RL RN [11]

RP SEQUENCE FROM N.A.

RC SPECIES=B.bubalis; Garg L.C.; Verma S.; "Cloning and sequencing of the ovine growth hormone gene." Indian J. Exp. Biol. 30:659-663(1992).

RA RA RL RN [12]

CC CC CC CC

CC -!- SUBCELLULAR LOCATION: Secreted.

CC -!- SIMILARITY: BELONGS TO THE SOMATOTROPIN/PROLACTIN FAMILY.

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 CC or send an email to license@isb-sib.ch).

CC DR EMBL; X12546; CAA31063.1; .
 DR EMBL; X15976; CAA34098.1; .
 DR EMBL; S50877; ABB24467.2; .
 DR EMBL; M37310; AAA1527.1; .
 DR EMBL; AF002113; AAB63473.1; .
 DR EMBL; AF002111; AAB63273.1; JOINED.
 DR EMBL; AF002112; AAB6327.1; JOINED.
 DR EMBL; Y00767; CAA68736.1; .
 DR EMBL; X07035; CAA300083.1; .
 DR EMBL; D00476; BAA00368.1; .
 DR EMBL; X72947; CAA51450.1; .
 DR EMBL; A09118; CAA00828.1; .
 DR PIR; S02225; STHSH.
 DR PIR; S00321; STSH.
 DR PIR; S00681; S00681.
 DR PIR; JU0031; JU0031.
 DR PIR; S22682; S32682.
 DR HSSP; P01246; 1B8T.
 DR InterPro; IPR001440; SOMATOTROPIN.
 DR Pfam; PF00103; hormone.
 DR PRINTS; PRO0836; SOMATOTROPIN.
 DR PROSITE; PS00266; SOMATOTROPIN_1; 1.
 DR PROSITE; PS00338; SOMATOTROPIN_2; 1.
 DR PROSITE; PS00338; SOMATOTROPIN_2; 1.
 DR Hormone; Pituitary; Signal.
 FT SIGNAL; 1 27
 FT CHAIN 28 217 SOMATOTROPIN.
 FT DISULFID 79 190
 FT DISULFID 207 215
 FT CONFLICT 89 89 G -> S (IN REF. 3).
 FT CONFLICT 125 125 N -> D (IN REF. 6).
 FT CONFLICT 134 134 R -> L (IN REF. 3).
 FT CONFLICT 173 173 T -> R (IN REF. 4).
 SQ SEQUENCE 217 AA; 24630 MW; 77EC37A102584429 CRC64;

Query Match 53.4%; Score 46.5%; DB 1; Length 217;
 Best Local Similarity 52.9%; Pred. No. 1.9;
 Matches 9; Conservative 3; Mismatches 4; Indels 1; Gaps 1;

Qy 1 YLRIVQCRSV-EGSCGF 16
 Db 201 YLRVMMCRRESEASCAF 217

RESULT 29
 SOMA_RANCA STANDARD PRT; 215 AA.
 ID SOMA_RANCA STANDARD PRT; 215 AA.
 AC P10813;
 DT 01-JUL-1989 (Rel. 11, Created)
 DT 01-FEB-1995 (Rel. 31, Last sequence update)
 DT 01-MAR-2002 (Rel. 41, Last annotation update)
 DE Somatotropin precursor (Growth hormone).
 GN GH.
 OS Rana catesbeiana (Bull frog).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Amphibia; Batrachia; Anura; Neobatrachia; Randidae; Ranae;
 OC NCBI_TAXID=8400;
 OX RN [1] SEQUENCE FROM N.A.
 RP TISSUE= Pituitary
 RX MEDLINE=88252154; PubMed=3260110;
 RA Pan F. M., Chang W.-C.;
 RT "Cloning and sequencing of bullfrog growth hormone complementary
 RT DNA.";
 RL Biophys. Acta 950:238-242(1988).
 RN [2]

RP SEQUENCE FROM N.A.
 RC TISSUE= Pituitary;
 RX MEDLINE=93119453; PubMed=1476615;
 RA Takahashi N., Kikuyama S., Gen K., Maruyama O., Kato Y.;
 RT "Cloning of a bullfrog growth hormone cDNA: expression of growth
 RT hormone mRNA in larval and adult bullfrog pituitaries.";
 RL J. Mol. Endocrinol. 9:283-289(1992).
 RN [3]
 RP SEQUENCE OF 26-215.
 RC TISSUE= Pituitary;
 RX MEDLINE=91316122; PubMed=1859828;
 RA Kobayashi T., Yasuda A., Yamaguchi K., Kawauchi H., Kikuyama S.;
 RT "The complete amino acid sequence of growth hormone of the bullfrog
 (Rana catesbeiana).";
 RL Biophys. Acta 1078:383-387(1991).
 CC -1- FUNCTION: GROWTH HORMONE PLAYS AN IMPORTANT ROLE IN GROWTH
 CC -1- CONTROL.
 CC -1- SUBCELLULAR LOCATION: Secreted.
 CC -1- DEVELOPMENTAL STAGE: LEVELS INCREASE AS METAMORPHOSIS PROGRESSES,
 CC -1- REACH MAXIMA IN JUVENILES AND DECREASE AS ADULTHOOD APPROACHES.
 CC -1- SIMILARITY: BELONGS TO THE SOMATOTROPIN/PROLACTIN FAMILY.
 CC -1-
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 CC -1-
 DR EMBL; X12520; CAA31038.1; .
 DR EMBL; S52024; AAB24732.1; .
 DR PIR; JS0037; JS0037.
 DR HSSP; P01241; 1HWU.
 DR InterPro; IPR001440; SOMATOTROPIN.
 DR Pfam; PF00103; hormone; 1.
 DR PRINTS; PRO0836; SOMATOTROPIN.
 DR PROSITE; PS00266; SOMATOTROPIN_1; 1.
 DR PROSITE; PS00338; SOMATOTROPIN_2; 1.
 DR SIGNAL; 1 27
 FT CHAIN 28 217 SOMATOTROPIN.
 FT DISULFID 79 190
 FT CONFLICT 207 215
 FT CONFLICT 89 89 G -> S (IN REF. 3).
 FT CONFLICT 125 125 N -> D (IN REF. 6).
 FT CONFLICT 134 134 R -> L (IN REF. 3).
 FT CONFLICT 173 173 T -> R (IN REF. 4).
 SQ SEQUENCE 217 AA; 24630 MW; 77EC37A102584429 CRC64;

Query Match 50.0%; Score 43.5%; DB 1; Length 215;
 Best Local Similarity 47.1%; Pred. No. 5.6%;
 Matches 8; Conservative 5; Mismatches 3; Indels 1; Gaps 1;
 FT CHAIN 26 215 SOMATOTROPIN.
 FT DISULFID 77 188 BY SIMILARITY.
 FT DISULFID 205 213 BY SIMILARITY.
 FT CONFLICT 68 73 SNRHSY -> KOTLLI (IN REF. 1).
 FT CONFLICT 98 98 D -> E (IN REF. 3).
 FT CONFLICT 105 105 T -> L (IN REF. 3).
 FT CONFLICT 112 112 T -> N (IN REF. 3).
 SQ SEQUENCE 215 AA; 24975 MW; 3C08D5840EFF102A CRC64;

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 FT CHAIN

| SEQUENCE FROM N.A. SEQUENCE OF 26-33; 52-58; 74-81; 117-123 AND STRAIN=BALB/C; TISSUE=Petal liver; MEDLINE=20460471; PDB=10901471; SEQID=1 | | Query Match Score 42; DB 1; Length 827; Best Local Matches 3; Conservative 3; Mismatches 4; Indels 0; Gaps 0; |
|--|---|---|
| SEQUENCE FROM N.A. SEQUENCE OF 26-33; 52-58; 74-81; 117-123 AND STRAIN=BALB/C; TISSUE=Petal liver; MEDLINE=20460471; PDB=10901471; SEQID=1 | | Qy 1 YLRIVQCRSEVGSC 14 |
| SEQUENCE FROM N.A. SEQUENCE OF 26-33; 52-58; 74-81; 117-123 AND STRAIN=BALB/C; TISSUE=Petal liver; MEDLINE=20460471; PDB=10901471; SEQID=1 | | Db 758 FLPVTCQEVGSC 771 |
| THEY PREFERENTIALLY INTERACT WITH THEMSELVES IN A HOMOPHILIC MANNER IN CONNECTING CELLS; CADHERINS MAY THUS CONTRIBUTE TO THE SORTING OF HETEROGENEOUS CELL TYPES. LI-CADHERIN MAY HAVE A ROLE IN THE MORPHOLOGICAL ORGANIZATION OF LIVER AND INTESTINE. | | RESULT 31 |
| -1 - TISSUE SPECIFICITY: HIGHEST EXPRESSION IS FOUND IN INTESTINE WITH LOWER EXPRESSION IN SPLEEN, BONE MARROW, LUNG AND TESTIS. NO EXPRESSION DETECTED IN LIVER, KIDNEY, HEART, BRAIN OR SKELETAL MUSCLE. EXPRESSED IN PRECURSOR B-CELLS AND MYELOID CELLS. | | PRRA_RAT STANDARD: PRT; 227 AA. |
| -1 - DEVELOPMENTAL STAGE: EXPRESSION INCREASES IN PRO- AND PRE-B-I CELLS, DECREASES IN LARGE AND SMALL PRE-B-II CELLS, AND INCREASES AGAIN IN IMMATURE AND MATURE B-CELLS. | | ID PRRRA_RAT P09320; DT 01-MAR-1989 (Rel. 10, Created) DT 01-MAR-1989 (Rel. 10, Last sequence update) DT 01-OCT-1994 (Rel. 30, Last annotation update) DE Placental prolactin-like protein A precursor (PLP-A). OS Rattus norvegicus (Rat); Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus. OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus. OX NCBI_TaxID=1016; RN [1] |
| -1 - SUBCELLULAR LOCATION: Type I membrane protein (Potential). | | RN SEQUENCE FROM N.A. MEDLINE=66278172; PubMed=3755436; RX Duckworth M.L.; Peden L.M.; Friesen H.G.; RT "Isolation of a novel prolactin-like cDNA clone from developing rat placenta." J. Biol. Chem. 261:10879-10884 (1986). |
| -1 - SIMILARITY: CONTAINS 7 CADHERIN DOMAINS. | | CC -1 - SUBCELLULAR LOCATION: Secreted. CC -1 - DEVELOPMENTAL STAGE: EXPRESSED FROM DAYS 14 TO TERM OF PREGNANCY. CC -1 - SIMILARITY: BELONGS TO THE SOMATOTROPIN/PROLACTIN FAMILY. |
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| EMBL; AF177669; AAD51125.1; -. HSSP; P15116; INC1. MGD; MG1:1093414; Cdhl7. InterPro; IPR002126; Cadherin. PFAM; PF00028; cadherin; 7. PRINTS; PR000205; CADHERIN. SMART; SMM0112; CA; 5. PROSITE; PS00232; CADHERIN 1; 3. PROSITE; PS52268; CADHERIN 2; 5. Cell adhesion; Glycoprotein; Transmembrane; Calcium-binding; Repeat; Signal; Transport. SIGNAL 1 25 CHAIN 26 827 CADHERIN-17. DOMAIN 26 786 EXTRACELLULAR (POTENTIAL). TRANSMEM 787 807 POTENTIAL. DOMAIN 808 827 CTOPLASMIC (POTENTIAL). DOMAIN 29 127 CADHERIN 1. DOMAIN 128 243 CADHERIN 2. DOMAIN 244 339 CADHERIN 3. DOMAIN 340 448 CADHERIN 4. DOMAIN 449 565 CADHERIN 5. DOMAIN 566 666 CADHERIN 6. DOMAIN 667 776 CADHERIN 7. CARBOHYD 148 148 N-LINKED (GLCNAC. . .) (POTENTIAL). CARBOHYD 249 249 N-LINKED (GLCNAC. . .) (POTENTIAL). CARBOHYD 418 418 N-LINKED (GLCNAC. . .) (POTENTIAL). CARBOHYD 545 545 N-LINKED (GLCNAC. . .) (POTENTIAL). CARBOHYD 573 573 N-LINKED (GLCNAC. . .) (POTENTIAL). CARBOHYD 586 586 N-LINKED (GLCNAC. . .) (POTENTIAL). CARBOHYD 721 721 N-LINKED (GLCNAC. . .) (POTENTIAL). SEQUENCE 827 AA; 91645 MW; 159F03A82DDAD66 CRC64; | DR PIR; A24911; A24911. DR HSSP; Q28632; 1AN3. DR InterPro; IPR001400; SOMATOTROPIN. DR PFAM; PF00103; SOMOTROPIN. DR PRINTS; PR00336; SOMOTROPIN. DR PROSITE; PS00266; SOMOTROPIN_1; 1. DR PROSITE; PS00338; SOMOTROPIN_2; 1. DR Hormone; Placenta; Glycoprotein; Signal. FT SIGNAL 1 31 POTENTIAL. FT DISULFID 32 227 PLACENTAL PROLACTIN-LIKE PROTEIN A. FT DISULFID 87 203 BY SIMILARITY. FT DISULFID 220 227 BY SIMILARITY. FT CARBOHYD 41 41 N-LINKED (GLCNAC. . .) (POTENTIAL). FT CARBOHYD 175 175 N-LINKED (GLCNAC. . .) (POTENTIAL). FT VARIANT 73 73 F->L (IT IS NOT SURE WHICH IS THE CORRECT RESIDUE) SQ SEQUENCE 227 AA; 26387 MW; 159F03A82DDAD66 CRC64; | |
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| -1 - The SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch). | | Db 214 YLKLLKCRLRSRC 227 |
| -1 - The SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch). | | RESULT 32 PYRD_PLAFA STANDARD: PRT; 569 AA. |
| -1 - The SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch). | | AC OPR210; |

DT 01-FEB-1995 (Rel. 31, Created)
 DT 01-FEB-1995 (Rel. 31, Last sequence update)
 DT 01-MAR-2002 (Rel. 41, Last annotation update)
 DT Dihydroorotate dehydrogenase homolog, mitochondrial precursor
 DE (EC 1.3.3.1) (Dihydroorotate oxidase) (Dihydrodehydrogenase)
 OS Plasmodium falciparum
 OX Eukaryota; Alveolata; Apicomplexa; Haemosporida; Plasmodium.
 NCBI_TAXID=5833
 RN [1]
 RP SEQUENCE FROM N.A.
 RC STRAIN=3D7;
 RX MEDLINE=94049995; PubMed=8232427;
 RA Leblanc S.B.; Wilson C.M.;
 RT "The dihydroorotate dehydrogenase gene homologue of Plasmodium falciparum.";
 RL Mol. Biochem. Parasitol. 60:349-352(1993).
 CC -1- CATALYTIC ACTIVITY: (S)-dihydroorotate + O(2) = orotate + H₂O(2).
 CC -1- COFACTOR: FAD.
 CC -1- PATHWAY: FOURTH STEP IN PYRIMIDINE BIOSYNTHESIS.
 CC -1- SUBCELLULAR LOCATION: Mitochondrial inner membrane (Probable).
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 CC DR EMBL; L15446; AAC37170.1;
 DR InterPro; IPR001295; DHO_0h.
 DR InterPro; IPR003009; FMN_enzyme.
 DR Pfam; PF01180; DHOdehydrogenase_1.
 DR PROSITE; PS00911; DHODEHA_E_1.
 DR PROSITE; PS00912; DHODEHA_E_2.
 KW Pyrimidine biosynthesis; Oxidoreductase; Flavoprotein; FAD;
 KW Transferrin peptide; Mitochondrion; Inner membrane.
 FT TRANSIT 1 ?
 FT CHAIN 2 ?
 FT NP BIND 235 569 DIHYDROOROTATE (NAD PART) (POTENTIAL).
 FT SEQUENCE 243 65558 MW; 88880384 EBD52FF3 CRC64;
 SQ 569 AA; 65558 MW;
 Query Match 47.1%; Score 41; DB 1; Length 569;
 Best Local Similarity 57.1%; Pred. No. 33;
 Matches 8; Conservative 2; Mismatches 4; Indels 0; Gaps 0;
 Qy 3 RIVQCRSVEGGSGCF 16
 | : | : | | |
 Db 265 RDVERSIISSGGF 278

RESULT 33
 ID NTIC4_MOUSE STANDARD; PRT; 1964 AA.
 AC P31695; Q62389;
 AC P31695; Q62389;
 DT 01-NOV-1993 (Rel. 26, Created)
 DT 16-OCT-2001 (Rel. 40, Last sequence update)
 DE Neurogenic locus notch homolog protein 4 precursor (Transforming protein INT-3).
 GN NOTCH4 OR INT-3 OR INT-3.
 OS Mus musculus (Mouse).
 OX Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
 RN [1]
 RP SEQUENCE FROM N.A.
 RX MEDLINE=9219450; PubMed=312663;
 RA Robbins J.; Blondel B.J.; Gallahan D.; Callahan R.;
 RT "Mouse mammary tumor gene int-3: a member of the notch gene family transforms mammary epithelial cells.";

RL J. Virol. 66:2594-2599(1992).
 RN [2]
 RP REVISIONS, SEQUENCE FROM N.A.
 RX MEDLINE=9621668; PubMed=8681805;
 RA Utterdael H.; Marazzi G.; Wu G.; Yan Q.; Sassoon D.; Kitajewski J.;
 RT "The mouse mammary tumor associated gene NT3 is a unique member of the NOTCH gene family (NOTCH4)." Oncogene 14:1883-1890(1997).
 RN [3]
 RP SEQUENCE FROM N.A.
 RC TISSUE-Lung, and Testis;
 RX MEDLINE=9621668; PubMed=8681805;
 RA Utterdael H.; Marazzi G.; Wu G.; Yan Q.; Sassoon D.; Kitajewski J.;
 RT "The mouse mammary tumor associated gene NT3 is a unique member of the NOTCH gene family (NOTCH4)." Oncogene 14:1883-1890(1997).
 RL Development 122:2251-2259(1996).
 CC -1- SUBCELLULAR LOCATION: Type I membrane protein.
 CC -1- DISEASE: ACTIVATES INT-3 TRANSFORMS MAMMARY EPITHELIAL CELLS.
 CC -1- SIMILARITY: CONTAINS 29 EGF-LIKE DOMAINS.
 CC -1- SIMILARITY: CONTAINS 3 LIN NOTCH REPEATS.
 CC -1- SIMILARITY: CONTAINS 5 ANK REPEATS.
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 CC DR EMBL; M80456; AAC383777.1;
 DR EMBL; A343691; AAC52630.1;
 DR PIR; A38072; TVWVT3.
 DR HSSP; P08709; 1BF9.
 DR MGI; 107471; Notch4.
 DR InterPro; IPR002110; ANK.
 DR InterPro; IPR0005152; ASX_hydroxyl.
 DR InterPro; IPR000561; EGF-like.
 DR InterPro; IPR000742; EGF-2.
 DR InterPro; IPR001881; EGF_Ca.
 DR InterPro; IPR001438; EGF_II.
 DR InterPro; IPR000800; Notch.
 DR Pfam; PF00023; ank; 6.
 DR Pfam; PF00008; EGF; 27.
 DR Pfam; PF00066; notch; 2.
 DR PRINTS; PRO0145; ANKRYIN.
 DR PRINTS; PRO0010; EGF_BLOOD.
 DR PRINTS; PRO1452; NOTCH.
 DR SMART; SM00248; ANK; 5.
 DR SMART; SM00179; EGF_Ca; 11.
 DR SMART; SM00001; EGF-like; 15.
 DR SMART; SM00004; NL; 2.
 DR PROSITE; PS50088; ANK_REPEAT; 5.
 DR PROSITE; PS50297; ANK_REPEAT; 1.
 DR PROSITE; PS50010; ASX_HYDROXYL; 11.
 DR PROSITE; PS501187; EGF_Ca; 9.
 KW Differentiation; Neurogenesis; Repeat; EGF-like domain; Transmembrane; Glycoprotein; Proto-oncogene; ANK repeat; Signal.
 FT SIGNAL 1 20
 FT CHAIN 21 1964
 FT DOMAIN 21 1443 EXTRACELLULAR (POTENTIAL).
 FT DOMAIN 21 1444 POTENTIAL.
 FT DOMAIN 1465 1964 CYTOPLASMIC (POTENTIAL).
 FT DOMAIN 21 60 EGF-LIKE 1.
 FT DOMAIN 61 112 EGF-LIKE 2.
 FT DOMAIN 115 152 EGF-LIKE 3.
 FT DOMAIN 153 189 EGF-LIKE 4.
 FT DOMAIN 191 229 EGF-LIKE 5, CALCIUM-BINDING (POTENTIAL).
 FT DOMAIN 231 271 EGF-LIKE 6.
 FT DOMAIN 273 309 EGF-LIKE 7, CALCIUM-BINDING (POTENTIAL).
 FT DOMAIN 311 350 EGF-LIKE 8, CALCIUM-BINDING (POTENTIAL).

| | | | | | | | |
|----|------|------|---|------------|--|-----------|----------------|
| FT | 352 | 388 | EGF-LIKE 9, CALCIUM-BINDING (POTENTIAL). | FT | DISULFID | 612 | BY SIMILARITY. |
| FT | 389 | 427 | EGF-LIKE 10. | FT | DISULFID | 626 | BY SIMILARITY. |
| FT | 429 | 470 | EGF-LIKE 11, CALCIUM-BINDING (POTENTIAL). | FT | DISULFID | 631 | BY SIMILARITY. |
| FT | 472 | 508 | EGF-LIKE 12, CALCIUM-BINDING (POTENTIAL). | FT | DISULFID | 646 | BY SIMILARITY. |
| FT | 510 | 546 | EGF-LIKE 13, CALCIUM-BINDING (POTENTIAL). | FT | DISULFID | 648 | BY SIMILARITY. |
| FT | 548 | 584 | EGF-LIKE 14, CALCIUM-BINDING (POTENTIAL). | FT | DISULFID | 662 | BY SIMILARITY. |
| FT | 586 | 622 | EGF-LIKE 15, CALCIUM-BINDING (POTENTIAL). | FT | DISULFID | 664 | BY SIMILARITY. |
| FT | 622 | 656 | EGF-LIKE 16. | FT | DISULFID | 676 | BY SIMILARITY. |
| FT | 658 | 686 | EGF-LIKE 17. | FT | DISULFID | 692 | BY SIMILARITY. |
| FT | 688 | 724 | EGF-LIKE 18. | FT | DISULFID | 697 | BY SIMILARITY. |
| FT | 726 | 762 | EGF-LIKE 19. | FT | DISULFID | 714 | BY SIMILARITY. |
| FT | 764 | 800 | EGF-LIKE 20. | FT | DISULFID | 730 | BY SIMILARITY. |
| FT | 803 | 839 | EGF-LIKE 21. | FT | DISULFID | 735 | BY SIMILARITY. |
| FT | 841 | 877 | EGF-LIKE 22. | FT | DISULFID | 752 | BY SIMILARITY. |
| FT | 878 | 924 | EGF-LIKE 23. | FT | DISULFID | 768 | BY SIMILARITY. |
| FT | 926 | 962 | EGF-LIKE 24. | FT | DISULFID | 773 | BY SIMILARITY. |
| FT | 964 | 1000 | EGF-LIKE 25. | FT | DISULFID | 790 | BY SIMILARITY. |
| FT | 1002 | 1040 | EGF-LIKE 26. | FT | DISULFID | 807 | BY SIMILARITY. |
| FT | 1042 | 1081 | EGF-LIKE 27. | FT | DISULFID | 812 | BY SIMILARITY. |
| FT | 1083 | 1122 | EGF-LIKE 28. | FT | DISULFID | 829 | BY SIMILARITY. |
| FT | 1126 | 1167 | EGF-LIKE 29. | FT | DISULFID | 845 | BY SIMILARITY. |
| FT | 1168 | 1208 | LIN/NOTCH 1. | FT | DISULFID | 850 | BY SIMILARITY. |
| FT | 1209 | 1242 | LIN/NOTCH 2. | FT | DISULFID | 867 | BY SIMILARITY. |
| FT | 1243 | 1282 | LIN/NOTCH 3. | FT | DISULFID | 882 | BY SIMILARITY. |
| FT | 1628 | 1657 | ANK 1. | FT | DISULFID | 897 | BY SIMILARITY. |
| FT | 1661 | 1691 | ANK 2. | FT | DISULFID | 914 | BY SIMILARITY. |
| FT | 1695 | 1724 | ANK 3. | FT | DISULFID | 930 | BY SIMILARITY. |
| FT | 1728 | 1757 | ANK 4. | FT | DISULFID | 935 | BY SIMILARITY. |
| FT | 1761 | 1790 | ANK 5. | FT | DISULFID | 952 | BY SIMILARITY. |
| FT | 25 | 38 | BY SIMILARITY. | FT | DISULFID | 968 | BY SIMILARITY. |
| FT | 32 | 48 | BY SIMILARITY. | FT | DISULFID | 973 | BY SIMILARITY. |
| FT | 50 | 59 | BY SIMILARITY. | FT | DISULFID | 990 | BY SIMILARITY. |
| FT | 65 | 77 | BY SIMILARITY. | FT | DISULFID | 1006 | BY SIMILARITY. |
| FT | 71 | 100 | BY SIMILARITY. | FT | DISULFID | 1030 | BY SIMILARITY. |
| FT | 102 | 111 | BY SIMILARITY. | FT | DISULFID | 1046 | BY SIMILARITY. |
| FT | 119 | 130 | BY SIMILARITY. | FT | DISULFID | 1059 | BY SIMILARITY. |
| FT | 124 | 140 | BY SIMILARITY. | FT | DISULFID | 1069 | BY SIMILARITY. |
| FT | 142 | 151 | BY SIMILARITY. | | | | |
| FT | 157 | 168 | BY SIMILARITY. | | | | |
| FT | 162 | 177 | BY SIMILARITY. | | | | |
| FT | 179 | 188 | BY SIMILARITY. | | | | |
| FT | 195 | 208 | BY SIMILARITY. | | | | |
| FT | 202 | 217 | BY SIMILARITY. | | | | |
| FT | 219 | 228 | BY SIMILARITY. | | | | |
| FT | 235 | 246 | BY SIMILARITY. | | | | |
| FT | 240 | 259 | BY SIMILARITY. | | | | |
| FT | 261 | 270 | BY SIMILARITY. | | | | |
| FT | 277 | 288 | BY SIMILARITY. | | | | |
| FT | 282 | 297 | BY SIMILARITY. | | | | |
| FT | 299 | 308 | BY SIMILARITY. | | | | |
| FT | 315 | 329 | BY SIMILARITY. | | | | |
| FT | 323 | 338 | BY SIMILARITY. | | | | |
| FT | 340 | 349 | BY SIMILARITY. | | | | |
| FT | 356 | 367 | BY SIMILARITY. | | | | |
| FT | 361 | 376 | BY SIMILARITY. | | | | |
| FT | 378 | 387 | BY SIMILARITY. | | | | |
| FT | 393 | 404 | BY SIMILARITY. | | | | |
| FT | 398 | 415 | BY SIMILARITY. | | | | |
| FT | 417 | 426 | BY SIMILARITY. | | | | |
| FT | 433 | 449 | BY SIMILARITY. | | | | |
| FT | 443 | 458 | BY SIMILARITY. | | | | |
| FT | 460 | 469 | BY SIMILARITY. | | | | |
| FT | 476 | 487 | BY SIMILARITY. | | | | |
| FT | 481 | 496 | BY SIMILARITY. | | | | |
| FT | 498 | 507 | BY SIMILARITY. | | | | |
| FT | 514 | 525 | BY SIMILARITY. | | | | |
| FT | 519 | 534 | BY SIMILARITY. | | | | |
| FT | 536 | 545 | BY SIMILARITY. | | | | |
| FT | 552 | 563 | BY SIMILARITY. | | | | |
| FT | 557 | 572 | BY SIMILARITY. | | | | |
| FT | 574 | 583 | BY SIMILARITY. | | | | |
| FT | 590 | 601 | BY SIMILARITY. | | | | |
| FT | 595 | 610 | BY SIMILARITY. | | | | |
| | | | | RESULT | 34 | | |
| | | | | LPXD_CHLTR | | | |
| | | | | ID | LNXD_CHLTR | STANDARD; | |
| | | | | AC | 084245; Q95530; | PRT; | 354 AA. |
| | | | | DT | 01-MAR-2002 (Rel. 4.1, Created) | | |
| | | | | DT | 01-MAR-2002 (Rel. 4.1, Last sequence update) | | |
| | | | | DT | 01-MAR-2002 (Rel. 4.1, Last annotation update) | | |
| | | | | DE | UDP-3-O-[3-hydroxymyristoyl] glucosamine N-acyltransferase | | |
| | | | | DE | (EC 2.3.1.-) | | |
| | | | | GN | LPXD OR CT243. | | |
| | | | | OS | Chlamydia trachomatis. | | |
| | | | | OC | Bacteria: Chlamydiales; Chlamydiaceae; Chlamydia. | | |
| | | | | NCBI_TaxID | 813; | | |
| | | | | OX | | | |
| | | | | RN | [1] | | |
| | | | | RP | SEQUENCE FROM N.A. | | |
| | | | | RC | STRAIN=D/UV3/Cx; | | |
| | | | | RX | MEDLINE=9000809; PubMed=794136; | | |
| | | | | RA | Stephens R. S., Kalman S., Lammel C. J., Fan J., Marathe R., Aravind L., Mitchell W. P., Olinger L., Tatusov R. L., Koonan E. V., Davis R. W.; | | |
| | | | | RA | "Genome sequence of an obligate intracellular pathogen of humans: Chlamydia trachomatis"; | | |
| | | | | RA | Science 285:754-759 (1998). | | |
| | | | | RL | [2] | | |
| | | | | RN | | | |
| | | | | RP | SEQUENCE FROM N.A. | | |
| | | | | RC | STRAIN=L2/434/Bu; | | |
| | | | | RX | MEDLINE=99392470; PubMed=10463174; | | |

| | |
|-----------------------|--|
| RA | Bannantine J.P., Rockey D.D. ; |
| RT | "Use of primary model system to identify Chlamydia trachomatis protein antigens recognized uniquely in the context of infection."; |
| RL | Microbiology 145:207-2085(1999). |
| CC | -!- CATALYTIC ACTIVITY: UDP-3-O-(3'-hydroxytetradecanoyl)glucosamine + (R)-3'-hydroxytetradecanoyl-[acyl]-carrier protein] = UDP-2,3-bis(3-hydroxytetradecanoyl)glucosamine + [acyl]-carrier protein. |
| CC | -!- PATHWAY: Lipid A biosynthesis; Third step. |
| CC | -!- SIMILARITY: BELONGS TO THE TRANSPEPTIDE HEXAPEPTIDE REPEAT FAMILY. |
| CC | LPSD SUBFAMILY. |
| CC | ----- |
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| CC | ----- |
| CC | AE001297; AAC67836.1; -. |
| DR | EMBL; AF071009; AAC35947.1; -. |
| DR | InterPro; IPR001451; Hexapep-transf. |
| PFAM | PF00132; hexapep; 8. |
| DR | PROSITE: PS00101; HEXAABP_TRANSFERASES; FALSE NEG. |
| KW | Transferase; Acyltransferase; Lipid A biosynthesis; Lipid synthesis; |
| KW | Repeat; Complete proteome. |
| FT | CONFLICT 2 2 S -> C (IN REF. 2). |
| FT | CONFLICT 7 7 S -> F (IN REF. 2). |
| FT | CONFLICT 157 157 E -> Q (IN REF. 2). |
| FT | CONFLICT 226 226 G -> A (IN REF. 2). |
| SEQUENCE | 354 AA; 38404 MW; B9C547C129AE17BB CRC64; |
| RESULT | 46.0%; Score: 40; DB: 1; Length: 354; |
| Best Local Similarity | 61.5%; Pred. No.: 31; |
| Matches | 8; Conservative 2; Mismatches 3; Indels 0; Gaps |
| Qy | 4 IVOCRSVSGSCGF 16 |
| Db | 178 IIQPGAVIGSCGF 190 |
| RESULT | 35 |
| LPXD_CHLPN | LPXD_CHLPN STANDARD; PRIT; 360 AA. |
| AC | Q9ZBN6; |
| DT | 01-MAR-2002 (Rel. 41, Created) |
| DT | 01-MAR-2002 (Rel. 41, Last sequence update) |
| DT | 01-MAR-2002 (Rel. 41, Last annotation update) |
| DE | UDP-3-O-(3'-hydroxytetradecanoyl)glucosamine N-acyltransferase |
| DE | (EC 2.3.1.1.) |
| DE | (EC 2.3.1.1.) |
| GN | LPXD OR CPN0302 OR CP0456. |
| OS | Chlamydia pneumoniae (Chlamydophila pneumoniae). |
| OC | Bacteria; Chlamydiales; Chlamydiaceae; Chlamydophila. |
| OX | NCBI_TaxID=833558; |
| RN | [1] |
| RP | SEQUENCE FROM N.A. |
| RC | STRAIN=CW029; |
| RX | MEDLINE=99206606; PubMed=10192388; |
| RA | Kalman S., Mitzcell W., Marzahl R., Lammel C., Fan J., Hyman R.W., Olinger L., Grimwood J., Davis R.W., Stephens R.S. ; |
| RA | "Comparative genomes of Chlamydia pneumoniae and C. trachomatis." ; Nat. Genet. 21:385-389(1999). |
| RN | [2] |
| RP | SEQUENCE FROM N.A. |
| RC | STRAIN=AR39; |
| RX | MEDLINE=0150255; PubMed=10584935; |
| RA | Read T.D., Brunham R.C., Shen C., Gill S.R., Heidelberg J.F., Barry E.K., Bass S., White O., Hickey E.K., Peterson J., Utterback T., Bowman C., Dodson R., Linher K., Woodward J., Khouri H., Craven B., Nelson W., DeBoy R., McClarty G., Salzberg S.L., Gwin M., Nelson W., DeBoy R., Kolonay J., McClarty G., Salzberg S.L., Eisen J., Fraser C.M. ; |
| RT | "Genome sequences of Chlamydia trachomatis MoPn and Chlamydia |

| | |
|--------------|--|
| RT | pneumoniae AB39." |
| RL | Nucleic Acids Res. 28:1397-1406 (2000). |
| RN | [3] |
| RP | SEQUENCE FROM N.A. |
| RC | SEQUENCE FROM N.A. |
| RA | STRAIN=J138; |
| RA | MEDLINE=20330349; PubMed=10871362; |
| RA | Shirai M., Hirakawa H., Kinoto M., Tabuchi M., Kishi F., Ouchi K., |
| RA | Ishii K., Hattori M., Kuhara S., Nakazawa T.; |
| RT | "Comparison of whole genome sequences of Chlamydia pneumoniae J138 |
| RT | from Japan and CWL029 from USA." |
| RL | Nucleic Acids Res. 28:2311-2314 (2000). |
| CC | -1 - CATALYTIC ACTIVITY: UDP-3-O-(3-hydroxytetradecanoyl)glucosamine + (R)-3-hydroxytetradecanoyl -[acyl-carrier protein] = UDP-2,3-bis(3-hydroxytetradecanoyl)glucosamine + [acyl-carrier protein] |
| CC | -1 - PATHWAY: Lipid A biosynthesis; Third step. |
| CC | -1 - SIMILARITY: BELONGS TO THE TRANSFERASE HEXAPEPTIDE REPEAT FAMILY. |
| CC | LXP2 SUBFAMILY. |
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| CC | EMBL; AE001615; ADD18451.1; -. |
| DR | EMBL; AE002207; AAF38294.1; -. |
| DR | EMBL; AE002516; BAA98512.1; -. |
| DR | PHCI-2DRAAE; Q9Z8H6; -. |
| DR | TIGR; CP0456; -. |
| DR | InterPro; IPI001451; Hexapep_transf. |
| DR | PFam; PF00132; hexapep_8. |
| DR | PROSITE; PS000101; HEXAPEP_TRANSFERASES; FALSE_NEG. |
| KW | Transferase; Acyltransferase; Lipid A biosynthesis; Lipid synthesis; |
| KW | Repeat; Complex protein. |
| SQ | SEQUENCE 360 AA; 38846 MW; 4CDD843A6F77B3F CRC64; |
| RESULT | 36 |
| Query | IVQCRSVEGSCGF 16 |
| Match | IVQCRSVEGSCGF 191 |
| Best | Score 40; |
| Local | Length 360; |
| Similarity | DB 1; |
| Matches | Pred. No. 31; |
| 8; | Mismatches 3; |
| Conservative | Indels 0; |
| 3; | Gaps |
| AC | STANDARD; PRT; 968 AA. |
| AC | P97857; 054768; |
| DT | 30-MAY-2000 (Rel. 39, Created) |
| DT | 16-OCT-2001 (Rel. 40, Last sequence update) |
| DT | 16-OCT-2001 (Rel. 40, Last annotation update) |
| DE | ADAMTS-1 precursor (EC 3.4.24.-) (A disintegrin and metalloproteinase with thrombospondin motifs 1) (ADAM-TS 1) (ADAM-TS 1). |
| GN | ADAMTS1. |
| OS | Mus musculus (Mouse). |
| OC | Eutheria; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; |
| OC | Mammalia; Eutheria; Rodentia; Sciurognathii; Muridae; Murinae; Mus. |
| OX | [1] |
| RN | SEQUENCE FROM N.A. |
| RC | SEQUENCE FROM N.A. |
| RX | MEDLINE=8110583; PubMed=9414751; |
| RA | Kuno K., Lizasa H., Ohno S., Matsushima K.; |
| RT | "the exon/intron organization and chromosomal mapping of the mouse ADAMTS-1 gene encoding an ADAM family protein with TSP motifs"; |
| RL | Genomics 46:466-471(1999). |
| RN | [2] |
| RP | SEQUENCE FROM N.A. |
| RX | MEDLINE=71150761; PubMed=8995297; |

Kuno K., Kanada N., Nakashima E., Fujiki F., Ichimura F., Matsushima K.; "Molecular cloning of a gene encoding a new type of metalloproteinase-disintegrin family protein with thrombospondin motifs as an inflammation associated gene." *J. Biol. Chem.* 272:556-562 (1997).

[3] CHARACTERIZATION, AND MUTAGENESIS OF GLU-403. MEDLINE=99303657; PubMed=10373500;

Kuno K., terashima Y., Matsushima K.; "ADAMTS-1 is an active metalloproteinase associated with the extracellular matrix." *J. Biol. Chem.* 274:18821-18826 (1999).

[4] FUNCTION, MEDLINE=20389568; PubMed=10930576;

Kuno K., Okada Y., Kawashima H., Nakamura H., Miyazaka M., Ohno H., Matsushima K.; "ADAMTS-1 cleaves a cartilage proteoglycan, aggrecan." *FEBS Lett.* 473:241-245 (2000).

[5] FUNCTION, AND INDUCTION, MEDLINE=20243757; PubMed=10781075;

Robker R.L., Russell D.L., Espy L.L., Lydon J.P., O'Malley B.W., Richards J.S.; "Progesterone-regulated genes in the ovulation process: ADAMTS-1 and cathepsin L proteases." *Proc. Natl. Acad. Sci. U.S.A.* 97:4689-4694 (2000).

-1- FUNCTION: CLEAVES AGGREGCAN, A CARTILAGE PROTEOGLYCAN, AND MAY BE INVOLVED IN ITS TURNOVER. HAS ANTI-OCULAR INHIBITOR ACTIVITY (BY SIMILARITY). ACTIVE METALLOPROTEASE, WHICH MAY BE ASSOCIATED WITH VARIOUS INFLAMMATORY PROCESSES AS WELL AS DEVELOPMENT OF CANCER CACHEXIA. MAY PLAY A CRITICAL ROLE IN FOLLICULAR RUPTURE (BY SIMILARITY).

-1- CATALYTIC ACTIVITY: CLEAVES AGGREGCAN AT THE 1691-GLU-1-LEU-1692 SITE, WITHIN THE CHONDROITIN SULFATE ATTACHMENT DOMAIN.

-1- COFACTOR: BINDS 1 ZINC ION (BY SIMILARITY).

-1- SUBCELLULAR LOCATION: SECRETED. ASSOCIATED WITH THE EXTRACELLULAR MATRIX.

-1- INDUCTION: INDUCED IN VITRO IN COLON ADENOCARCINOMA CELLS BY INTERLEUKIN-1, OR IN VIVO IN KIDNEY AND HEART BY LIPOPOLYSACCHARIDE. ALSO INDUCED BY LH STIMULATION IN GRANULOSA CELLS OF PREOVULATORY FOLLICLES.

-1- DOMAIN: THE SPACER DOMAIN AND THE TSP TYPE-1 DOMAINS ARE IMPORTANT FOR A TIGHT INTERACTION WITH THE EXTRACELLULAR MATRIX.

-1- PTM: THE PRECURSOR IS CLEAVED BY A FURIN ENDOPEPTIDASE.

-1- SIMILARITY: BELONGS TO PEPTIDASE FAMILY M12B.

-1- SIMILARITY: CONTAINS 1 DISINTEGRIN-LIKE DOMAIN.

-1- SIMILARITY: CONTAINS 3 TSP TYPE-1 DOMAINS.

-1- CAUTION: REF. 2 SEQUENCE DIFFERS FROM THAT SHOWN DUE TO A FRAMESHIFT IN POSITION 7.

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EMBL: AB001735; BAA24501.1; ALT_INIT. EMBL: D67076; BAA11088.1; ALT_FRAME. MEROPS: M12.222; -. MGB: MG1:109449; Adams1. InterPro: IPR001762; Disintegrin. InterPro: IPR002810; Pep_M12_propep. InterPro: IPR001520; Reprolysin. InterPro: IPR000884; TSP1. InterPro: IPR001130; Zn_Mtppeptdse. Pfam: PF01156; Pep_M12B_propep; 1. Pfam: PF01421; Reprolysin; 1. SMART: SM00039; TSP1. Pfam: PF00090; TSP1. SMART: SM00039; TSP1.

| | |
|-----------------------|--|
| DR | PROSITE: PS50215; ADAM_MEPRO; 1; FALSE_NEG. |
| DR | PROSITE: PS04427; DISINTEGRIN_1; FALSE_NEG. |
| DR | PROSITE: PS50092; TSP1; 3. |
| DR | PROSITE: PS00142; ZINC_PROTEASE; 1. |
| KW | Hydrolyase; Metalloprotease; Zinc; Signal; Gly |
| KW | repeat; Extracellular matrix; Heparin-binding |
| KW | SIGNAL 1 48 |
| PROPEP | PROPEP 49 253 ADAMTS-1. |
| PROPEP | PROPEP 206 206 CYSTEINE SWITCH |
| PROPEP | PROPEP 402 402 ZINC (CATALYTIC) |
| PROPEP | PROPEP 403 403 ZINC (CATALYTIC) |
| METAL | METAL 406 406 ZINC (CATALYTIC) |
| METAL | METAL 412 412 ZINC (CATALYTIC) |
| METAL | METAL 477 559 DISINTEGRIN-LIKE |
| DOMAIN | DOMAIN 560 617 TSP TYPE-1.1. |
| DOMAIN | DOMAIN 618 725 CYS-RICH. |
| DOMAIN | DOMAIN 726 850 SPACER. |
| DOMAIN | DOMAIN 851 909 TSP TYPE-1.2. |
| DOMAIN | DOMAIN 910 968 TSP TYPE-1.3. |
| CARBOYD | CARBOYD 195 199 POLY-ARG. |
| CARBOYD | CARBOYD 548 548 N-LINKED (GLCNAC |
| CARBOYD | CARBOYD 721 721 N-LINKED (GLCNAC |
| CARBOYD | CARBOYD 765 765 N-LINKED (GLCNAC |
| CARBOYD | CARBOYD 783 783 N-LINKED (GLCNAC |
| CARBOYD | CARBOYD 946 946 N-LINKED (GLCNAC |
| MUTAGEN | MUTAGEN 403 403 E>Q: LOSS OF ACT. |
| CONFFLICT | CONFFLICT 335 335 N -> S (IN REF). |
| CONFFLICT | CONFFLICT 425 425 T -> S (IN REF). |
| SEQUENCE | SEQUENCE 968 AA; 105841 MW; 42EBDA5499FB. |
| Query Match | 46.08; Score 40; DB 1; |
| Best Local Similarity | 60.08; Pred. No. 75; |
| Matches | 6; Conservative 2; Mismatches |
| 2dy | 3 RIVQCRSVEG 12 |
| Ddb | 878 RVVQCRDING 887 |
| RESULT | 37 |
| ID | DPOL_ADE02 STANDARD; PRT; 1056 AA. |
| AC | AC P03261; 21-JUL-1986 (Rel. 01, Created) |
| DT | DT 21-JUN-1986 (Rel. 01, Last sequence update) |
| DT | DT 15-DEC-1998 (Rel. 37, Last annotation update). |
| DE | DE DNA polymerase (EC 2.7.7.7). |
| POL | POL. |
| IN | IN Human adenovirus type 2. |
| DS | DS dsDNA viruses, no RNA stage; Adenovirus |
| DX | DX NCBI_TaxID=10515; |
| RN | RN SEQUENCE FROM N.A. |
| RN | RN MEDLINE=83056843; PubMed=7142161; |
| RX | RX Gingera P., Sioki-Jaervi G., Pettersson M., Pe |
| RX | RX Alestrova P., Akusjaervi G., Pettersson M., Pe |
| RX | RX "DNA sequence analysis of the region encoding |
| RX | RX and the hypothetical N-gene product of adenov |
| RX | RX J. Biol. Chem. 257:13492-13498 (1982). |
| RX | RX -1- CATALYTIC ACTIVITY: N deoxyribonucleoside triph |
| RX | RX + (DNA) (N). |
| RX | RX -1- MISCELLANEOUS: THIS DNA POLYMERASE REQUIRE |
| RX | RX -1- SIMILARITY: BELONGS TO DNA POLYMERASE TYP |
| RX | RX This SWISS-PROT entry is copyright. It is pro |

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CC EMBL; J01917; AAA92206.1; -
 DR PIR; A00711; WMA012.

DR InterPro; IPR002064; DNA_pol_B.
 DR Pfam; PF00136; DNA_pol_B; 1.

DR PRINTS; PRO00106; DNAPOLB.

DR SMART; SM00486; POLBC; 1.

DR PROSITE; PS00116; DNA_POLYMERASE_B; 1.

KW Transferase; DNA-directed DNA Polymerase; DNA replication;

KW DNA-binding.

SQ SEQUENCE 1056 AA; 120432 MW; CD36FD6DF4E3A9EA CRC64; -

Query Match 46.0%; Score 40; DB 1; Length 1056;
 Best Local Similarity 50.0%; Pred. No. 81;
 Matches 6; Conservative 4; Mismatches 2; Indels 0; Gaps 0;

QY 4 IVQCRSVEGSGC 15
 Db 911 LVECETVGACG 922

RESULT 38
 DPOL_ADE05 ID DPOL_ADE05 STANDARD; PRT; 1056 AA.
 AC P04495; 13-AUG-1987 (Rel. 05, Created)
 RT 13-AUG-1987 (Rel. 05, Last sequence update)
 RT 15-DEC-1998 (Rel. 37, Last annotation update)
 DE DNA polymerase (EC 2.7.7.7).
 GN POL.
 OS Human adenovirus type 5.
 OC dsDNA viruses, no RNA stage; Adenoviridae; Mastadenovirus.
 RN (1)
 SQ SEQUENCE FROM N.A.
 RX MEDLINE:84183604; PubMed=6325298;

RA Decker, B.M.M., van Ormondt, H.;

RT "The nucleotide sequence of fragment HindIII-C of human adenovirus

type 5 DNA (map positions 17.1-31.7)." ;

RT Gene 27:115-120 (1984).

CC -1- CATALYTIC ACTIVITY: N deoxynucleoside triphosphate = N diphosphate

DE DNA polymerase (EC 2.7.7.7).
 GN POL.

CC -1- MISCELLANEOUS: THIS DNA POLYMERASE REQUIRES A PROTEIN AS A PRIMER.

CC -1- SIMILARITY: BELONGS TO DNA POLYMERASE TYPE B FAMILY.

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CC DR EMBL; X02996; CAA26749.1; -
 DR PIR; A00712; DJAD51.

DR InterPro; IPR002064; DNA_pol_B.

DR Pfam; PF00136; DNA_pol_B; 1.

DR PRINTS; PRO00106; DNAPOLB.

DR SMART; SM00486; POLBC; 1.

DR PROSITE; PS00116; DNA_POLYMERASE_B; 1.

KW Transferase; DNA-directed DNA Polymerase; DNA replication;

KW DNA-binding.

SQ SEQUENCE 1056 AA; 120400 MW; AE1BBC107A334E99 CRC64; -

Query Match 46.0%; Score 40; DB 1; Length 1056;

Best Local Similarity 50.0%; Pred. No. 81;
 Matches 6; Conservative 4; Mismatches 2; Indels 0; Gaps 0;
 QY 4 IVQCRSVEGSGC 15
 Db 911 LVECETVGACG 922

RESULT 39
 Y192_HUMAN STANDARD; PRT; 2124 AA.
 ID Y192_HUMAN
 AC Q93074;
 AC Q93074; (Rel. 35, Created)
 DT 01-NOV-1997 (Rel. 35, Last sequence update)
 DT 16-OCT-2001 (Rel. 40, Last annotation update)
 DE Hypothetical protein KIAA0192 (Fragment).
 GN KIAA0192.

OS Homo sapiens (Human).

OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

OC Mammalia; Etheria; Primates; Catarrhini; Hominidae; Homo.

OX NCBI_TaxID=9606;

RN [1]
 RP SEQUENCE FROM N.A.
 RC TISSUE=bone marrow;
 RX MEDLINE:96281124; PubMed=8724849;
 RA Nagase T., Seki N., Isikawa K.-I., Tanaka A., Nomura N.;
 RT "Prediction of the coding sequences of unidentified human genes. V.
 RT The coding sequences of 40 new genes (KIAA0161-KIAA0200) deduced by
 RL DNA Res. 3:17-24 (1996)."
 CC -1- TISSUE SPECIFICITY: UBQUITOUS.

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CC DR EMBL; D83783; BAA12112.1; -
 DR MIM; 300188; -
 KW Hypothetical protein.
 FT NON_TER 1 1
 FT DOMAIN 599 602
 FT DOMAIN 1201 1207
 FT DOMAIN 1998 2124
 FT DOMAIN 1998 2023
 FT DOMAIN 2028 2033
 FT DOMAIN 2037 2070
 FT DOMAIN 2090 2097
 SQ SEQUENCE 2124 AA; 237207 MW; 255FB9419EC39F42 CRC64;

Query Match 46.0%; Score 40; DB 1; Length 2124;
 Best Local Similarity 46.7%; Pred. No. 1.5e+02;
 Matches 7; Conservative 3; Mismatches 5; Indels 0; Gaps 0;
 QY 2 LRVQCRSVEGSGCF 16
 Db 1043 LRALC5SSNNGTGCF 1057

RESULT 40
 PRL_BUFA STANDARD; PRT; 134 AA.
 ID PRL_BUFA
 AC P43001;
 DT 01-NOV-1995 (Rel. 32, Created)
 DT 01-NOV-1995 (Rel. 32, Last sequence update)
 DE Prolactin (PRL) (Fragment).
 OS Bufo japonicus (Japanese toad).

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CC DR EMBL; X02996; CAA26749.1; -
 DR PIR; A00712; DJAD51.

DR InterPro; IPR002064; DNA_pol_B.

DR Pfam; PF00136; DNA_pol_B; 1.

DR PRINTS; PRO00106; DNAPOLB.

DR SMART; SM00486; POLBC; 1.

DR PROSITE; PS00116; DNA_POLYMERASE_B; 1.

KW Transferase; DNA-directed DNA Polymerase; DNA replication;

KW DNA-binding.

SQ SEQUENCE 1056 AA; 120400 MW; AE1BBC107A334E99 CRC64; -

| |
|--|
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| CC EMBL: AF069399; AAC19390_1; - . |
| CC HSSP: P01241; HUW. |
| CC DR InterPro: IPR01400; SOMATOTROPIN. |
| CC PFam: PF00103; hormone_2. |
| CC PRINS: PR00836; SOMATOTROPIN. |
| CC PROSITE: PS0026; SOMATOTROPIN_1; 1. |
| CC PROSITE: PS00338; SOMATOTROPIN_2; 1. |
| CC Hormone; Pituitary; Signal. |
| CC SIGNAL 1 22 BY SIMILARITY. |
| CC CHAIN 23 210 SOMATOTROPIN II. |
| CC FT DISUFID 71 183 BY SIMILARITY. |
| CC FT DISUFID 200 208 BY SIMILARITY. |
| CC SEQUENCE 210 AA; 23767 MW; 3F54F2EAABD87731 CRC64; |
| Query Match 45.4%; Score 39.5; DB 1; Length 210; |
| Best Local Similarity 46.7%; Pred. No. 23; Mismatches 3; Indels 1; caps 1; |
| Matches 7; Conservative 4; Mismatches 3; Indels 1; caps 1; |
| QY 1 YLRIVQC-RSEVGSC 14 |
| Db 194 YLRVANCRRLSDNC 208 |
| RESULT 46 |
| SOMA_CTEID |
| ID SOMA_CTEID STANDARD; PRT; 210 AA. |
| P20390; Q002220; Q00221; |
| AC DT 01-FEB-1991 (Rel. 17, Created) |
| DT 01-DEC-1992 (Rel. 24, Last sequence update) |
| DT 01-MAR-2002 (Rel. 41, Last annotation update) |
| DE Somatotropin precursor (Growth hormone). |
| GN GH. |
| OS Ctenopharyngodon idella (Grass carp). |
| OS Hypophthalmichthys molitrix (Silver carp), and |
| OS Hypophthalmichthys nobilis (Noble carp). |
| OS Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; |
| OC Actinopterygii; Neopterygii; Teleostei; Euteleostei; Ostariophysi; |
| OC Cypriniformes; Cyprinidae; Ctenopharyngodon. |
| NCBI_TaxID:7959; 13095, 7965; |
| [1] |
| RN SEQUENCE FROM N.A. |
| RP SPECIES=C.idella; |
| RC MEDLINE=92031700; PubMed=1932119; |
| RX HO W.K.K.; Wong M.W.; Chan A.P.Y.; |
| RA "Cloning and sequencing of the grass carp (Ctenopharyngodon idella) growth hormone gene"; |
| RT growth hormone gene"; |
| RT Biochem. Biophys. Acta 1090:245-248(1991). |
| [2] |
| RP SEQUENCE FROM N.A. |
| RP SPECIES=C.idella; |
| RC MEDLINE=89302103; PubMed=2742587; |
| RX HO W.K.K.; Tseng W.H.; Dias N.P.; |
| RA "Cloning of the grass carp growth hormone cDNA"; |
| RT Biochem. Biophys. Res. Commun. 161:1239-1243(1989). |
| [3] |
| RP SEQUENCE FROM N.A. |
| RP SPECIES=C.idella, H.molitrix, and H.nobilis; TISSUE=Pituitary; |
| RC MEDLINE=93051159; PubMed=1426941; |
| RX Chang Y.S.; Liu C.S.; Huang F.-L.; Lo T.B.; |
| RA "The primary structures of growth hormones of three cyprinid species: bighead carp, silver carp, and grass carp."; |
| RT Gen. Comp. Endocrinol. 87:385-393(1992). |
| [4] |
| RP SEQUENCE FROM N.A. |
| RP SPECIES=C.idella; TISSUE=Liver; |
| RC MEDLINE=922339453; PubMed=1633815; |
| RX |

| | |
|---|--|
| Zhu Z., He L., Chen T.T., | "Primary-structural and evolutionary analyses of the growth-hormone gene from grass carp (<i>Ctenopharyngodon idellus</i>).", |
| RT | |
| RT | Gene from grass carp (<i>Ctenopharyngodon idellus</i>)."; |
| RL | Eur. J. Biochem. 207:643-648 (1992). |
| -1- | FUNCTION: GROWTH HORMONE PLAYS AN IMPORTANT ROLE IN GROWTH |
| CC | CONTROL |
| CC | -!- SUBCELLULAR LOCATION: Secreted. |
| CC | -!- SIMILARITY: BELONGS TO THE SOMATOTROPIN/PROLACTIN FAMILY. |
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| CC | |
| CC | DR M27094; AAAX58724.1; |
| DR EMBL X60419; CAA42948.1; | |
| DR EMBL X60474; CAA43007.1; | |
| DR EMBL X60988; CAA43304.1; | |
| DR EMBL X60475; CAA43008.1; | |
| DR EMBL X60473; CAA43006.1; | |
| DR PIR A32424; A32424. | |
| DR PIR: S18402; S18402. | |
| DR PIR: S21898; S21898. | |
| DR PIR: S21910; S21910. | |
| DR PIR: S24371; S24371. | |
| DR PIR: S32707; S32707. | |
| DR PIR: S21915; S21915. | |
| DR HSSP: P01241; IHWU. | |
| DR InterPro: IPR01400; SOMATOTROPIN. | |
| DR Pfam: PF00103; hormone_2. | |
| DR PRINTS: PRO08836; SOMATOTROPIN. | |
| DR PROSITE: PS00266; SOMATOTROPIN_1; 1. | |
| DR PROSITE: PS00338; SOMATOTROPIN_2; 1. | |
| KW Hormone; Pituitary; Signal. | |
| FT SIGNAL 1 23 BY SIMILARITY. | |
| FT CHAIN 24 210 SOMATOTROPIN. | |
| FT DISULFID 71 183 BY SIMILARITY. | |
| FT DISULFID 200 208 BY SIMILARITY. | |
| FT CONFLICT 73 73 S -> C (IN REF. 2 AND 3). | |
| FT CONFLICT 112 112 S -> R (IN REF. 3). | |
| FT CONFLICT 114 114 A -> Q (IN REF. 2 AND 3). | |
| SO SEQUENCE 210 AA: 23580 MW: 98AAB3FECD52D098 CRC64; | |
| Query Match 45.4%; Score 39.5; DB 1; Length 210; | |
| Best Local Similarity 46.7%; Pred. No. 23; | |
| Matches 7; Conservative 4; Mismatches 3; Indels 1; Gaps 1; | |
| Qy 1 YLRIYQC-RSYEVGSC 14 | |
| : : : | |
| Db 194 YLRVANCRRLDSNC 208 | |
| RESULT 47 | |
| SOMA_CYPCA STANDARD; PRT; 210 AA. | |
| ID SOMA_CYPCA | |
| AC P10298; | |
| AC 01-MAR-1989 (Rel. 10, Created) | |
| DT 01-FEB-1991 (Rel. 17, Last sequence update) | |
| DT 01-MAR-1992 (Rel. 21, Last annotation update) | |
| DE Somatotropin precursor (Growth hormone) | |
| GN GH. | |
| OS Cynipinus carpio (Common carp). | |
| OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; | |
| OC Actinopterygii; Neopterygii; Teleostei; Euteleostei; Ostariophysi; | |
| OC Cypriniformes; Cyprinidae; Cyprinus. | |
| OX NCBI_TaxID=7962; | |
| RN [1] | |

"Cloning of a gar (*Lepisosteus osseus*) GH cDNA: trends in actinopterygian GH structure.";
 J. Mol. Endocrinol. 16:73-80(1996).
 -I- FUNCTION: GROWTH HORMONE PLAYS AN IMPORTANT ROLE IN GROWTH CONTROL AND INVOLVED IN THE REGULATION OF SEVERAL ANABOLIC PROCESSES. IMPLICATED AS A OSMOREGULATORY SUBSTANCE IMPORTANT FOR SEAWATER ADAPTATION.
 -I- SUBCELLULAR LOCATION: Secreted.
 -I- SIMILARITY: BELONGS TO THE SOMATOTROPIN/PROLACTIN FAMILY.

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 EMBL: S82528; AAB7388 1; -.

DR HSSP; P01246; 1B5T.
 DR InterPro: IPR001400; SOMATOTROPIN.
 DR Pfam: PF00103; hormone_1.
 DR PRINTS: PR00536; SOMATOTROPIN.
 DR PROSITE: PS00266; SOMATOTROPIN_1; 1.
 DR PROSITE: PS00338; SOMATOTROPIN_2; 1.
 DR Hormone; Pituitary; Signal.
 FT SIGNAL 1 23 POTENTIAL.
 FT CHAIN 24 211 SOMATOTROPIN.
 FT DISULFID 73 184 BY SIMILARITY.
 FT DISULFID 201 209 BY SIMILARITY.
 SQ SEQUENCE 211 AA: 23998 MW: 85F55390954ED9EB CRC64; -.

Query Match 45.4%; Score 39.5; DB 1; Length 213;
 Best Local Similarity 46.7%; Pred. No. 24;
 Matches 7; Conservative 5; Mismatches 2; Indels 1; Gaps 1;
 Qy 1 YLRIVQCRS-VEGSC 14
 Db 195 YLKVMKCRREVESNC 211

Search completed: July 10, 2002, 08:29:04
 Job time: 201 sec

"Cloning of a gar (*Lepisosteus osseus*) GH cDNA: trends in actinopterygian GH structure.";
 J. Mol. Endocrinol. 16:73-80(1996).
 -I- FUNCTION: GROWTH HORMONE PLAYS AN IMPORTANT ROLE IN GROWTH CONTROL AND INVOLVED IN THE REGULATION OF SEVERAL ANABOLIC PROCESSES. IMPLICATED AS A OSMOREGULATORY SUBSTANCE IMPORTANT FOR SEAWATER ADAPTATION.
 -I- SUBCELLULAR LOCATION: Secreted.
 -I- SIMILARITY: BELONGS TO THE SOMATOTROPIN/PROLACTIN FAMILY.

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 EMBL: S82528; AAB7388 1; -.

DR HSSP; P01246; 1B5T.
 DR InterPro: IPR001400; SOMATOTROPIN.
 DR PRINTS: PR00536; SOMATOTROPIN.
 DR PROSITE: PS00266; SOMATOTROPIN_1; 1.
 DR PROSITE: PS00338; SOMATOTROPIN_2; 1.
 DR Hormone; Pituitary; Signal.
 FT SIGNAL 1 23 POTENTIAL.
 FT CHAIN 24 211 SOMATOTROPIN.
 FT DISULFID 73 184 BY SIMILARITY.
 FT DISULFID 201 209 BY SIMILARITY.
 SQ SEQUENCE 213 AA: 24556 MW: CB24A0F31BBD0EFF CRC64; -.

Query Match 45.4%; Score 39.5; DB 1; Length 213;
 Best Local Similarity 46.7%; Pred. No. 24;
 Matches 7; Conservative 5; Mismatches 2; Indels 1; Gaps 1;
 Qy 1 YLRIVQCRS-VEGSC 14
 Db 197 YLKVMKCRREVESNC 211

Search completed: July 10, 2002, 08:29:04
 Job time: 201 sec

Query Match 45.4%; Score 39.5; DB 1; Length 211;
 Best Local Similarity 46.7%; Pred. No. 23;
 Matches 7; Conservative 5; Mismatches 2; Indels 1; Gaps 1;
 Qy 1 YLRIVQCRS-VEGSC 14
 Db 195 YLKVMKCRREVESNC 209

RESULT 50
 SONA_BUPTMA
 ID SONA_BUPTMA
 STANDARD; PRT; 213 AA.

AC 073849;
 DT 01-MAR-2002 (Rel. 41, Created)
 DT 01-MAR-2002 (Rel. 41, Last sequence update)
 DT 01-MAR-2002 (Rel. 41, Last annotation update)
 DE Somatotropin Precursor (Growth hormone).
 GN GH.

OS Bufo marinus (Giant toad) (Cane toad).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Bufonidae; Bufo.
 OC Amphibia; Batrachia; Anura; Neobatrachia; Bufonidae; Bufonidae; Bufo.
 OX NCBL-TaxID-8386;
 RN [1]
 RP SEQUENCE FROM N.A.

RC TISSUE-Pituitary;
 RA May D., Alrubaian J., Patel S., Dores R.M., Rand-Weaver M.;
 RT "Studies on the GH/SL gene family: cloning of African lungfish (Protopterus annectens) growth hormone and somatotactin and toad (Bufo marinus) growth hormone.";
 RT Submitted (MAY-1998) to the EMBL/GesBank/DBJ databases
 CC -I- FUNCTION: GROWTH HORMONE PLAYS AN IMPORTANT ROLE IN GROWTH CONTROL.
 CC -I- SUBCELLULAR LOCATION: Secreted.
 CC -I- SIMILARITY: BELONGS TO THE SOMATOTROPIN/PROLACTIN FAMILY.

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 EMBL: AF062746; AAC16497.1; -.
 DR HSSP; P01246; 1B5T.
 DR InterPro: IPR001400; SOMATOTROPIN.
 DR Pfam: PF00103; hormone_1.
 DR PRINTS; PR00836; SOMATOTROPIN_1.
 DR PROSITE: PS00266; SOMATOTROPIN_1.
 DR Hormone; Pituitary; Signal.
 FT SIGNAL 1 25 POTENTIAL.
 FT CHAIN 26 213 SOMATOTROPIN.
 FT DISULFID 77 186 BY SIMILARITY.
 FT DISULFID 203 211 BY SIMILARITY.
 SQ SEQUENCE 213 AA: 24556 MW: CB24A0F31BBD0EFF CRC64; -.

